DENTISTRY LIBRARY

# ental
# igest

**May 1958**

## IN THIS ISSUE

emporary Splinting in Perio-dontal Therapy—Part One . . 208
ress and the Disease of Adap-tation—Part Two . . . . . 213
luoridation of Public Water Supplies and its Relation to Muscoloskeletal Diseases (An Abstract) . . . . . 215
he Present Status of Surgery in the Treatment of Cancer (An Abstract) . . . . . 215
oceed Eruption Used in Pre-ference to a Space Main-tainer . . . . . 216
luoride vs. Nonfluoride Popu-lations (An Abstract) . . . . . 217
onsurgical Treatment in Tri-geminal Neuralgia (An Ab-stract) . . . . . 217
nathologic and Periodontal Concept in Oral Rehabilita-tion—Part Three . . . . . 218
New Maneuver in the Reduc-tion of Mandibular Disloca-tion: Report of a Case . . . . . 222
phthous Stomatitis (An Ab-stract) . . . . . 224
linical and Laboratory Sugges-tions . . . . . 226

*(A complete Table of Contents appears on page 207)*

*Cover illustration—Atterbury article, page 222*

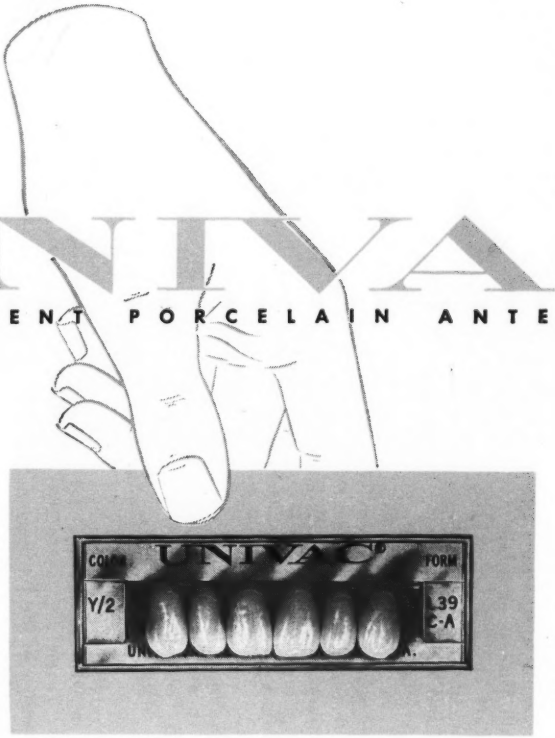
UNIVERSAL ACCURATE CONTROL

UNIVAC®

"A porcelain of exquisite beauty"

UNIVAC®

LIFELUCENT PORCELAIN ANTERIORS




DENSE UNIVAC PORCELAIN GRINDS SMOOTHLY AND CAN BE POLISHED TO ITS ORIGINAL GLOSS AND FINISH

*Do see Univac without delay!* For here, is an entirely new and radiant lifelucent porcelain such as you've never seen before . . . and one which you're certain to welcome enthusiastically.

You'll see an incredible glowing "aliveness"—new "living" colors and color dispersions that you will at once recognize as a tremendous asset to your practice. These new qualities are possible now through the development of advanced techniques. They are processed electronically. The result is an exquisite blending of porcelains to create natural 3-dimensional effects so brilliantly alive in the mouth that it is virtually impossible to distinguish them from vital teeth.

Your Universal Dealer will be glad to demonstrate Univac Anteriors at your convenience. *Study them* — you'll insist upon Univac — *only* Univac — for *your* patients.

SPECIFY WITH THE DUAL-DIAL COLOR GUIDE

UNIVERSAL DENTAL COMPANY · 48TH AT BROWN STREET · PHILADELPHIA 39, PA.

Vol. 64, No. 5

# Dental Digest

Registered in U.S. Patent Office

MAY 1958

Temporary Splinting in Periodontal Therapy—Part One
*Frank J. Fiaschetti, D.D.S.* ..... 208

Stress and the Disease of Adaptation—Part Two
*André Robert, M.D.* ..... 213

Fluoridation of Public Water Supplies and its Relation to Muscoloskeletal Diseases (An Abstract) ..... 215

The Present Status of Surgery in the Treatment of Cancer (An Abstract) 215

Forced Eruption Used in Preference to a Space Maintainer
*Arnold D. Steinberg, D.D.S.* ..... 216

Fluoride vs. Nonfluoride Populations (An Abstract) ..... 217

Nonsurgical Treatment in Trigeminal Neuralgia (An Abstract) ..... 217

Gnathologic and Periodontal Concept in Oral Rehabilitation—Part Three—*Lewis B. Udis, D.D.S., and Edward L. Udis, D.D.S.* ..... 218

A New Maneuver in the Reduction of Mandibular Dislocation: Report of a Case
*Robert A. Atterbury, B.S., D.D.S.* ..... 222

Aphthous Stomatitis (An Abstract) ..... 224

The Editor's Page ..... 225 Contra-Angles ..... 233

Clinical and Laboratory Suggestions ..... 226

Medicine and the Biologic Sciences ..... 228

Hospital Infections Due to Antibiotic Resistant Staphylococci (An Abstract) ..... 238

Fluophosphate in Table Salt Might Control Dental Caries (An Abstract) ..... 240

The Contamination of Anesthetic Needles (An Abstract) ..... 241

## *About Our* CONTRIBUTORS

FRANK JOHN FIASCHETTI, B.S. (Syracuse University, 1937), D.D.S. (University of Pennsylvania, 1946) specializes in oral diagnosis and periodontics. In collaboration with the late Gordon R. Winter, Doctor Fiaschetti last published in DIGEST an article on the illumination of the oral cavity. This month he presents the first installment of a two-part illustrated article, TEMPORARY SPLINTING IN PERIODONTAL THERAPY.

ANDRÉ ROBERT, B.S. (Stanislas College, Montreal, 1944), M.D. (University of Montreal Medical School, 1950), Ph.D., in Experimental Medicine (University of Montreal, 1957) is Research Associate, Department of Endocrinology, the Upjohn Company. In this issue he concludes his two-part article, STRESS AND THE DISEASES OF ADAPTATION.

ARNOLD D. STEINBERG, D.D.S. (Northwestern University, Dental School, 1954) is a general practitioner, and is a member of the staff of Michael Reese Hospital in Chicago where he treats handicapped children only. For his first appearance in DIGEST Doctor Steinberg presents FORCED ERUPTION USED IN PREFERENCE TO A SPACE MAINTAINER.

LEWIS B. UDIS, D.D.S. (Temple University Dental School, 1940), (Columbia University Graduate School of Orthodontics, 1941), and his co-author, EDWARD L. UDIS, D.D.S. (Temple University Dental School, 1942) are associated in the practice of rehabilitation and orthodontics. They present the final installment of a three-part article, GNATHOLOGIC AND PERIODONTAL CONCEPT IN ORAL REHABILITATION.

ROBERT A. ATTERBURY, B.S., D.D.S. (University of Illinois, College of Dentistry, 1942) is Clinical Assistant Professor of Oral and Maxillofacial Surgery at the University of Illinois College of Dentistry and Clinical Assistant Professor of Surgery at the Research and Educational Hospitals. Doctor Atterbury's presentations are distinguished for the versatility of his approach to dental problems. His present article is A NEW MANEUVER IN THE REDUCTION OF MANDIBULAR DISLOCATIONS.

**EDWARD J. RYAN, B.S., D.D.S., Editor**
**WANDA T. PICKARD, B.A., Assistant Editor**
**708 Church Street, Evanston, Illinois**

*Copyright, 1958, by Dental Digest, Inc. See page 198 for subscription data, etc.*
*The magazine is mailed on the fifteenth of the month of issue.*

# *Temporary Splinting* *in* PERIODONTAL THERAPY – Part One

FRANK J. FIASCHETTI, D.D.S., Binghamton, New York

**DIGEST**

***In the treatment of periodontally involved teeth it is often desirable to stabilize groups of teeth so that they can better withstand the occlusal force exerted upon them. Temporary splinting methods are used when this stabilization is desired for periods of time varying from a few days to several months.***

***Splinting several teeth together ideally results in a large multirooted "tooth" with excellent mesiodistal stabilization and moderate buccolingual stabilization. Usually, splinting brings the forces exerted upon each splinted tooth within its physiologic limits and yet allows sufficient movement to stimulate adequately the entire periodontal membrane and promotes healing.***

***This two-part article, of which this is the first installment, discusses the indications for temporary splinting and presents a number of simple and effective splinting procedures.***

## *Indications for the Use of Temporary Splinting*

Splinting techniques may be used to obtain the following results:

1. To increase patient comfort and afford the involved teeth physiologic rest prior to starting periodontal treatment. In cases where the teeth are extremely mobile, painful and possibly secondarily infected, the immediate stabilization of these teeth will reduce patient discomfort and aid in reducing the inflammation present.

2. During periodontal treatment where tooth mobility would make difficult proper clinical procedures. During the grinding operations involved in occlusal equilibration, the teeth must be firm and stable. Likewise, scaling, curettage, and gingivectomy require that the teeth be stabilized. In particular, the proper treatment of the infrabony pocket requires excellent splinting technique for optimum results.

3. To evaluate the possible results obtainable from the use of a permanent splint (full coverage). By splinting the involved teeth and observing the results, it is possible to judge whether it would be of definite value to utilize a permanent splint before going through the lengthy and costly procedures involved.

4. To immobilize sore, painful teeth in cases of acute periodontal infection for patient comfort. Frequently, the initial visit of a periodontal patient is on an emergency basis and reveals a single tooth involvement in the presence of a painful periodontal infection. Simple splinting and emergency treatment will usually result in immediate relief.

5. After periodontal treatment, to promote physiologic rest of the involved teeth and to aid in the healing process. In many cases the use of a temporary splint for a few weeks following therapy will promote the healing process immeasurably.

6. To hold teeth in position following orthodontic tooth movement performed during the course of periodontal treatment. In all cases where single or multiple teeth have been rotated, tilted, or moved in any manner, temporary splinting should be utilized to ensure proper healing and maintenance of position. It is also frequently necessary to make a retainer for night wear following the removal of the temporary splint.

## *Temporary Splinting Methods*

1. Wire ligature
2. Silk ligature and acrylic
3. Orthodontic bands
4. Acrylic biteguard
5. Intradental plastic splint
6. Removable plastic splint

## *Wire Ligature*

This method is ideal to use in the case of anterior teeth because of their size and shape. It is limited in its use on posterior teeth because of the large size and bulging shape of these teeth. Where esthetics is not a problem, the wire ligature is the method of choice for anterior teeth. [1,2,3]

*Materials*—The following materials are used:

1. Arch wire, single strand 0.020 dead soft stainless steel.

2. Arch wire, double strand 0.010 dead soft stainless steel.

3. Interdental wires, single strand 0.007, or 0.008 dead soft stainless steel.

---

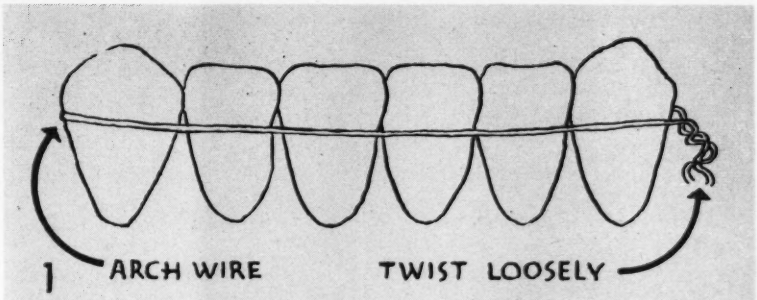
[1]Goldman, H. M.; Schluger, S.; and Fox, I: Periodontal Therapy, St. Louis, C. V. Mosby Co., 1956. pp. 367-386.
[2]Hirshfeld, L.: The Use of Wire and Silk Ligatures, JADA **41**:647 (Dec.) 1950.
[3]Simring, M.: Splinting: Theory and Practice, JADA **45**:402 (Oct.) 1952.

*Procedure*—The following steps are taken:

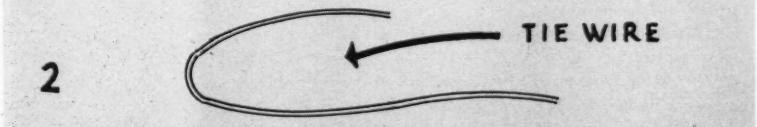
1. Place an arch wire loop around the teeth to be splinted, using a single strand of 0.020 or a double strand of 0.010 wire. Adapt the wire to the labial and lingual surfaces of the teeth and tie the ends together by twisting loosely at the distal of one of the end teeth to be splinted (Fig. 1).

2. Prepare the required number of interdental tie wires by bending one-inch sections into the form of a hairpin with one arm longer than the other (Fig. 2).

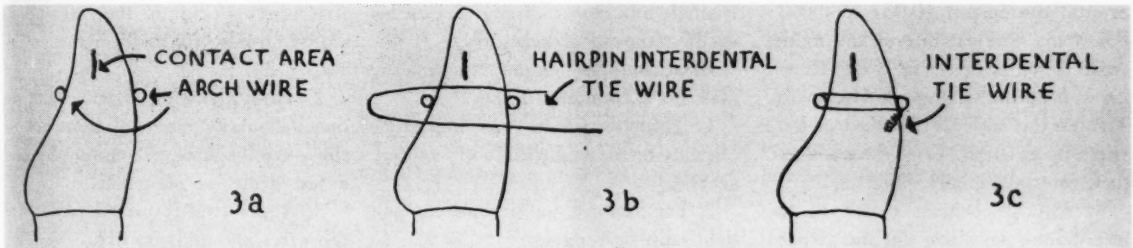
3. Place the interdental tie wires in position one by one, starting at the end opposite the arch wire tie. Insert each hairpin from the lingual, passing the longer arm gingival to the arch wires and the short arm occlusal to the arch wires but below the contact point.



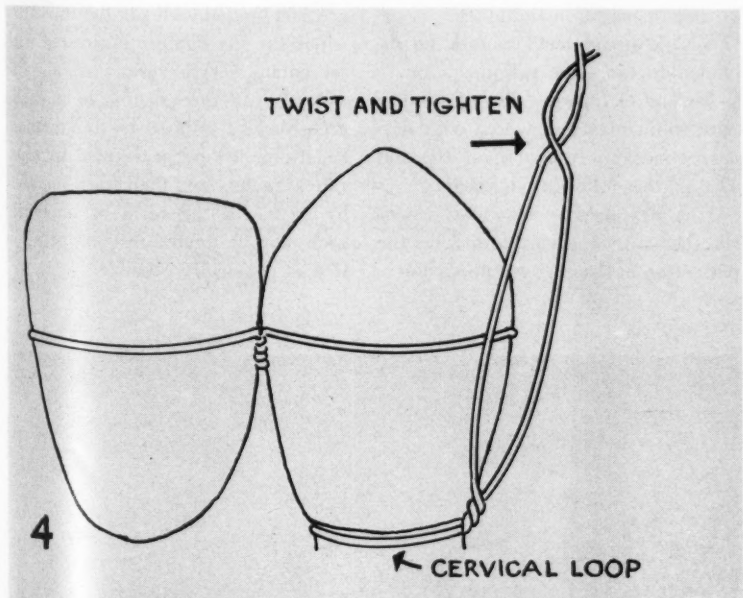

**1.** ***Arch wire loop.***




**2.** ***Interdental tie wire.***



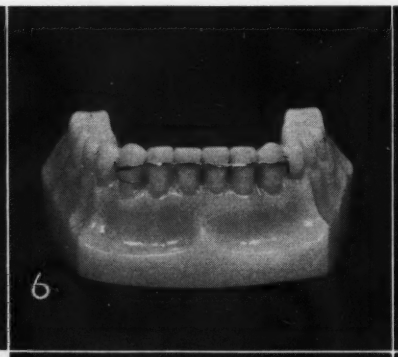

**3a, 3b,** and **3c.** ***Placing and fixing interdental tie wire.***




**4.** ***Cervical loop for holding arch wire in position.***

4. Using a hemostat or narrow beaked pliers, twist the two ends of the hairpin together tightly (Figs. 3a, 3b, and 3c). Repeat this with all the interdental wires, making certain that the arch wire remains incisal to the cingulum but gingival to the contact point. Care should be taken to maintain the arch wire loop fairly tight during this entire procedure so that the tie wires do not pull it through the interproximal spaces and force a separation of the teeth.

5. The arch wire may split off the cuspid because of the conical shape or lack of contact with the first bicuspid. This may be prevented by placing a cervical loop on this tooth and tying it to the arch wire to maintain the arch wire in its proper position. To do this, tie a cervical loop



**5.** ***Arch loop with tie wires in position (note cervical loop on cuspid).***
**6.** ***Tie wire twisted and tucked interproximally.***
**7.** ***Lingual view of finished wire ligature splint.***
**8.** ***Wire ligature as applied to stabilize upper lateral incisor.***
**9.** ***Lingual view of maxillary wire ligature.***

around the cuspid (0.007 to 0.008) below the cervical line of the tooth; twist it only three or four times; bring it up and engage the arch wire. Tighten the ends of the cervical loop wires by twisting. Trim the ends and tuck interproximally (Fig. 4).

6. After placement of all of the interdental tie wires, cut the twisted ends of the wires to about two or three millimeters and tuck these ends interproximately, using the amalgam plugger or similar instrument (Fig. 3c). Avoid overtwisting the interdental tie wire which will cause breakage. Make certain there are no sharp ends of wire protruding to irritate the patient's lip or tongue (Figs. 5, 6, 7, 8, and 9).

7. Check the occlusion for prematurities and freedom in all excursions. Make any necessary adjustments.

8. Check the splint periodically to make certain that it has not slipped or loosened. If necessary, pull any loose interdental wires from their position, using a scaler, tighten, and bend back interproximally as before. Replace any broken wires.

*Advantages*—1. The splint is quickly made and easy to apply. 2. Can be easily removed if necessary.

*Disadvantages*—Some drawbacks may be encountered:

1. Esthetic results are imperfect but may be masked with tooth-colored acrylic.

2. The ligature may irritate the patient's lip or tongue.

3. The splint is difficult to keep clean.

4. Frequent examination is required to maintain tightness.

5. Additional teeth cannot be included in the same splint.

*Method to Improve Esthetics*—The wire splint may be covered with self-curing acrylic resin (Figs. 10, and 11) in the following manner:

1. A dry field is absolutely essential, hence it is advisable to give the patient an antisialogogue about forty-five minutes prior to the resin application. Isolate the field, using cotton rolls.

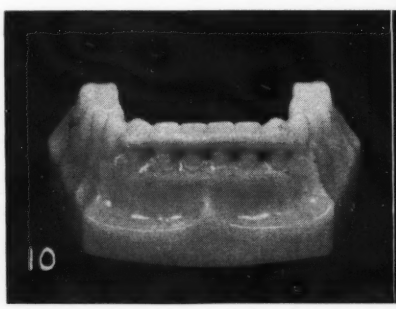
2. Paint the arch wires, using an opacifier paste made of light yellow zinc oxyphosphate cement powder and a few drops of monomer.

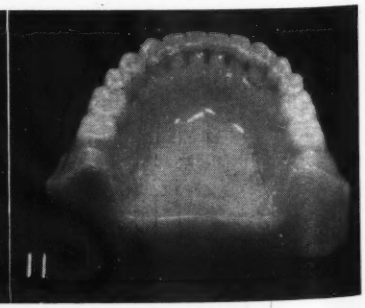
3. Apply freshly mixed resin over the wires and allow to dry.

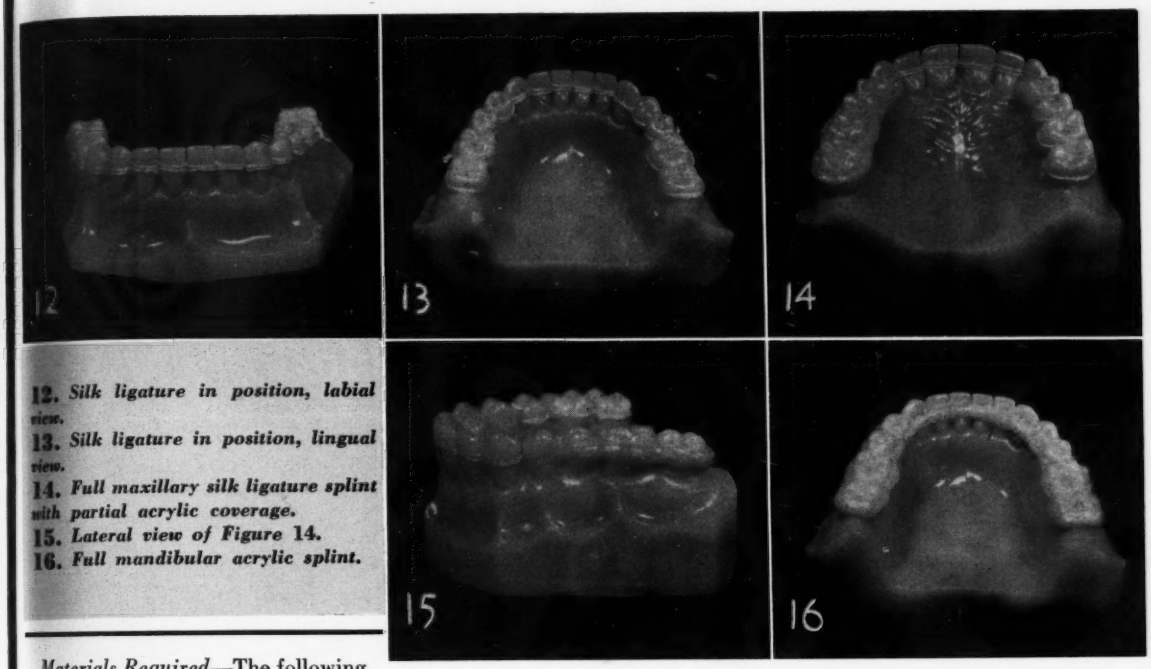
### *Silk Ligature and Acrylic*

In this method the involved teeth are first ligated with silk ligature after which the silk ligature is covered with self-curing acrylic resin. Any number of teeth from three or four to an entire arch may be splinted by this method. Ligation may be performed in separate segments and then fixed together by means of the resin or an entire arch may be ligated in one operation if it is physically possible.[3]

**10.** ***Wire ligature covered with acrylic, labial view.***
**11.** ***Wire ligature covered with acrylic, lingual view.***







**12.** ***Silk ligature in position, labial view.***
**13.** ***Silk ligature in position, lingual view.***
**14.** ***Full maxillary silk ligature splint with partial acrylic coverage.***
**15.** ***Lateral view of Figure 14.***
**16.** ***Full mandibular acrylic splint.***

*Materials Required*—The following materials are used:

1. Any white braided silk ligature.
2. Self-curing acrylic resin.
3. Straight and right angle sable brushes.

*Procedure*—The following steps are completed:

1. Since a dry field is imperative in this procedure, it is necessary to give the patient an antisialogogue in addition to the careful use of cotton roll isolation. Banthine bromide, 100 milligrams, or atropine sulphate, grains 0.01 may be given about forty-five minutes prior to treatment.

2. The teeth to be splinted are ligated with silk ligature, and passed around each tooth twice. On posterior teeth the ligature is placed at the height of the tooth contour (the greatest buccolingual diameter of the tooth). Avoid drawing the lingual too tight or it will slip gingivally.

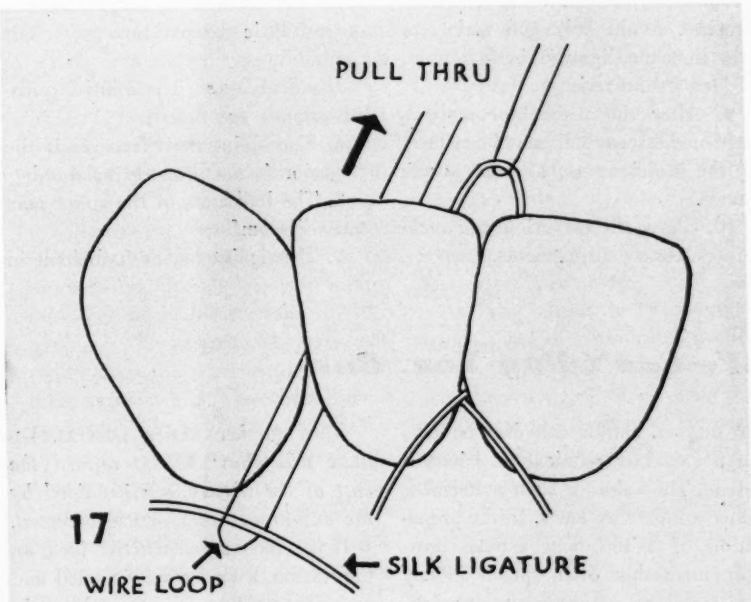
3. For anterior teeth, the ligature may be wound around the teeth in a figure eight fashion and should be placed incisal to the cingulum of the tooth but gingival to the contact point (Figs. 12, 13, 14, 15, and 16).

4. Occasionally, because of the shape and contact areas of the teeth, it may be simpler to place a double loop of ligature around two or three teeth without passing it between all of the teeth. This method is satisfactory but results in a rather bulky splint.

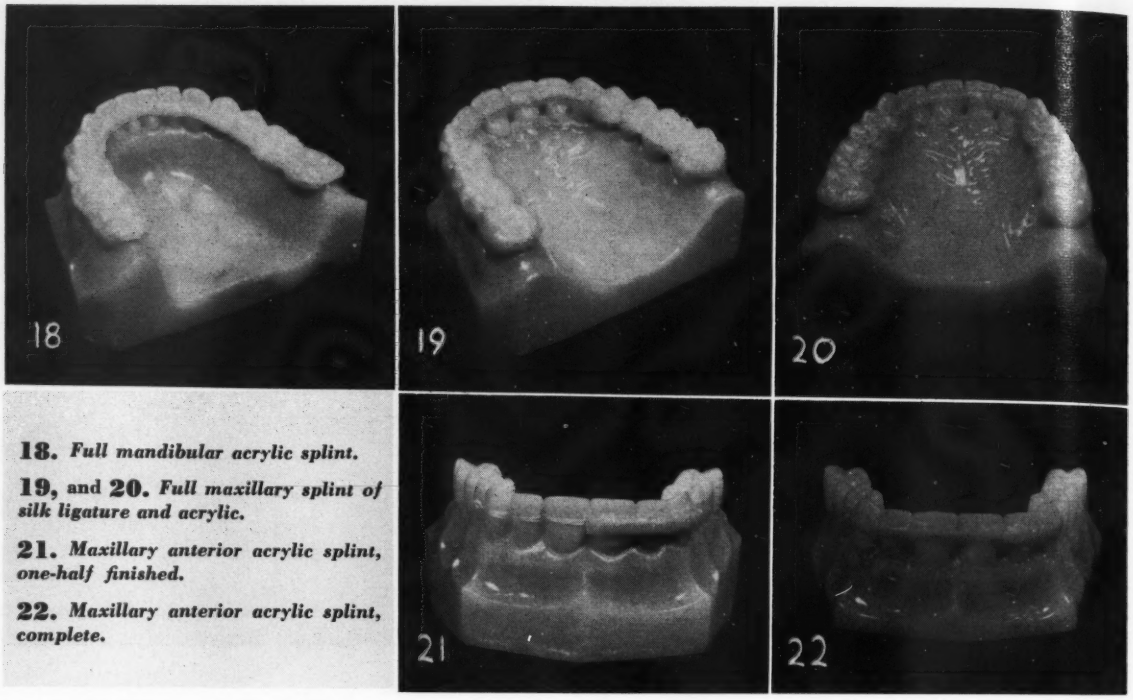
5. If the contact point between two teeth to be splinted is extremely tight, a loop of fine wire (0.006 inches in diameter) may be used as a hook to pass beneath the contact point and pull the silk ligature through (Fig. 17).

6. Cover the silk ligature with acrylic resin using the nonpressure technique of application. Straight and right angle brushes will make it possible to reach all areas. The silk ligature should be completely covered but bulk should be avoided.

7. Where there may be danger of the resin impinging on the interdental gingiva between the contact points, these areas may be filled with soft




**17.** ***Wire hook for use with silk ligature where contacts are tight.***




**18.** ***Full mandibular acrylic splint.***

**19,** and **20.** ***Full maxillary splint of silk ligature and acrylic.***

**21.** ***Maxillary anterior acrylic splint, one-half finished.***

**22.** ***Maxillary anterior acrylic splint, complete.***

wax before application of the resin and be removed later after it has set (Figs. 18, 19, 20, 21, and 22).

8. Alternative method of mixing and applying the resin may be used for a medium or small sized splint in the following manner: Make a thin mix of the resin on a cold slab and carefully paint it on the ligature as quickly as possible using the sable brushes. Avoid bulk and make certain that the ligature is firmly imbedded in the resin.

9. After the resin is completely hardened, excess bulk may be reduced by the judicious use of small acrylic stones.

10. Check the occlusion and make any necessary adjustments.

*Advantages*—1. These splints may be used in any part of the arch or for the entire arch.

2. The splint is esthetically acceptable.

3. Additional teeth may be included at either end of the splinted section.

4. The method is simple and requires little preparation or chair time.

*Disadvantages*—The following disadvantages are noted:

1. The splint may fracture if the occlusion is not properly balanced.

2. The bulkiness of the splint may cause discomfort.

3. This splint makes it difficult in many cases to clean the teeth properly and massage the gingiva. Food impaction may result.

4. There may be some decalcification of the areas covered if the splint is allowed to remain in position for excessive periods of time.

5. Unless the occlusion is properly equilibrated after splinting, temporomandibular joint symptoms may appear and one or more teeth in the opposite arch may become sore and mobile.

6. These splints usually require replacement after four to six months.

(End First Installment)

81 *Front Street*

## *We Can't Pay You, But—*

No DENTAL author can ever be *paid* for a valuable technical or scientific article. The value of such material is above a monetary basis. In the preparation of a technical article, however, an author often spends money for drawings, photographs, models, or graphs. We should like to help defray some of these expenses.

*Until further notice* DENTAL DIGEST *will allow* $25.00 *toward the cost of the illustrations provided by the author of every article accepted.*

If you have a constructive idea, an innovation, a new result of tried and proved experiment, put it down in writing, illustrate it, and send the material to: DENTAL DIGEST, 708 Church Street, Evanston, Illinois.

A booklet of suggestions for the preparation of manuscripts. DIRECTIONS TO AUTHORS, will be sent to any dentist upon request.

We can make suitable black-and-white cuts from Kodachrome transparencies.

*We hope that you will accept this invitation.*

# STRESS *and The Diseases of Adaptation—Part Two*

ANDRÉ ROBERT, M.D., PH.D., Kalamazoo, Michigan

**DIGEST**

***In this installment, the second of a two-part article, the author discusses in particular the diseases of adaptation. Steps in the development of Selye's concept are presented in detail and the functional characteristics of the hormones when applied are clarified.***

## The Diseases of Adaptation

The discovery of stress in 1936 and the conclusions drawn from the experiments reported and of many others performed in the following years had their counterpart in human disease and could explain several reactions which appear in man following exposure to noxious agents. It was understandable in particular that some disturbances could stem from an insufficient response of the pituitary-adrenal axis in a situation of stress. This could be due to two factors: (1) the aggression might be too great, too sudden to allow the organism to react in time, or (2) the defense system might not respond adequately to a stimulus which can be relatively mild.

*Another Type of Pathology of Adaptation*—It had been established that during the G-A-S, hormones were liberated in greater quantities than when the organism was in a resting state, and that these hormones increased the resistance of the body to the various stressing agents. Would it be possible then that under certain conditions these hormones could be *formed in excess?* In cases of a derangement of the pituitary or the adrenals, could these glands secrete too much of their hormones? If this were so, what would the consequences of an over-production be?

*Crucial Question Answered*—In 1940 a few purified preparations of adrenal hormones became available. Selye injected one of these, desoxycorticosterone (DCA), daily to rats. After a few weeks, he noted that the animals were in poor condition and that their growth curve was impaired. He also observed that they excreted daily more urine than normally. He measured the blood pressure and found it to be markedly elevated in all of them. Finally, at autopsy (1) the kidneys showed typical lesions of nephrosclerosis, (2) Aschoff nodules were scattered throughout the heart (which is a rather typical lesion of rheumatic fever), and (3) the vascular tree was the site of advanced periarteritis nodosa. This syndrome resembled closely human malignant hypertension.

*Fatal Disease Reproduced*—For the first time it had been possible to reproduce this fatal disease with a pure hormone normally secreted by the adrenals. This experiment cleared the road to hypothesis according to which these vascular and renal lesions could appear spontaneously if, as a response to stress, the adrenals liberated this type of hormone in excess.

*Hypothesis Corroborated* — The same syndrome of malignant hypertension was reproduced by exposing animals to low temperature (+1° Centigrade) for about a month, provided they were given an excess of alimentary sodium. It was particularly noteworthy that these pathologic changes did not appear when the adrenals had been removed. In fact, if an animal was adrenalectomized and placed in a cold room during the same period (during which it received low doses of adrenal hormones in order to keep it alive) no vascular lesions developed. These results strongly indicated that the adrenals, during stress, could secrete corticoids in such quantities that vascular diseases could occur.

*Effects of Overdosage Studied*—Whenever other adrenal and pituitary hormones became available, the effect of their overdosage was studied. Eventually, it became clear that the pituitary as well as the adrenals secreted in particular two types of hormones endowed with antagonistic properties: (A) the "antiphlogistic" hormones (ACTH, cortisone, cortisol) and (B) the "prophlogistic" hormones (STH or somatotophic hormone also known as growth hormone, DCA, aldosterone, Reichstein's compound S).

(A) Principal Actions of Antiphlogistic Hormones, that is, ACTH, Hydrocortisone: a) They inhibit inflammatory processes.

b) They inhibit the lesions of periarteritis and of myocarditis produced by the prophlogistic hormones. However, they increase the severity of the renal lesions (nephrosclerosis) obtained with the prophlogistic hormones.

c) They have a catabolic action.

d) They favor the spreading of infection.

(B) Principal Actions of Prophlogistic Hormones, that is, STH, DCA: a) They augment the intensity

of inflammatory reactions (for instance, they aggravate arthritis).

b) They favor the development of hypertension and renal (nephrosclerosis), vascular (periarteritis), and cardiac (myocarditis) lesions.

c) In general they exhibit an anabolic effect.

d) They prevent the spreading of infection.

(C) Interaction between Anti- and Prophylogistic Hormones.

### Functional Characteristics

Except for the kidney, these two types of hormones antagonize each other when they are administered concurrently. For instance, the antiphlogistic effect of cortisone is diminished when DCA, a prophlogistic hormone, is also given.

*Importance of Mutual Antagonism*—Recently, this phenomenon of mutual antagonism has taken still more importance by the discovery of aldosterone in the adrenals and blood of man. Aldosterone, a natural mineralocorticoid, when given simultaneously with cortisol (hydrocortisone) blocked the following effects of cortisol: (1) loss of body weight, (2) inhibition of inflammatory reaction, (3) spleen atrophy. The correctness of the concept according to which the development of biologic phenomena, such as inflammation, is to a large extent function of a balance between two natural corticoids, has indeed been demonstrated through methods of direct observation.

*Concept of Equilibrium in Function*—Normally, after exposure to a stressing agent, the organism reacts by developing a general adaptation syndrome during which pituitary and adrenal hormones are secreted in greater amounts; but according to Selye's concept the two types of hormones are maintained in equilibrium and neither predominates excessively over the other.

*Derailment of the G-A-S*—In certain conditions, however, an imbalance occurs. This has been called a *derailment of the G-A-S* which can give rise to diseases of adaptation, so called because they result from the efforts of the organism to adapt itself to unfavorable conditions. It is easily understood that the clinical picture of such diseases resembles the pathologic changes observed following an experimental overdosage with one of these adaptive hormones, changes which have been tabulated herein.

*Hormones in Themselves do not Cause Disease*—It is a fundamental point that hormones merely prepare the terrain to the action of a pathogenic agent present in the organism. The following example illustrates this principle. If a foreign body, for instant, a splinter, accidentally penetrates the skin, an inflammatory reaction surrounds it and tends to imprison it and by so doing this invader is isolated and the damage reduced to a limited surface of the body.

*Excessive Secretion of Prophlogistic Hormones*—If the pituitary and/or the adrenals secrete prophlogistic hormones in too great amounts, the inflammatory granuloma will become enormous and may induce the formation of deep adhesions where the foreign body has penetrated. Thus a disease of the inflammatory type develops.

*Predominance of Antiphlogistic Hormones*—The inflammatory reaction will be greatly inhibited when there is a predominance of the antiphlogistic hormones, encapsulation will not take place, and the microbes which have been introduced together with the foreign body will not be kept inside an inflammatory capsule but will tend to spread and to create distant infectious foci. The wound will not heal well and will remain open. However, the pathogen, in this case, the foreign body, is always the origin, the cause of the disease, and not the hormones themselves which were secreted as a reaction to it.

*Variations in Adaptation*—The diseases of adaptation can be varied according to the nature of the pathogen and its localization; but they imply an excessive activity of one or the other type of hormones. Accordingly, in some cases there will be an exaggeration of the defense against a pathogen, in other circumstances the reaction to it will be insufficient.

*Underlying Mechanisms*—One of the following mechanisms will be found to underlie this kind of disease:

1. Actual and excessive increase in the secretion of prophlogistic hormones.

2. Actual and excessive increase in the secretion of antiphlogistic hormones.

3. Normal secretion of both types of hormones, but increased sensitivity of certain tissues or organs to one of these types.

However, whether there is a real or a relative augmentation in the secretion of hormones, in practice this corresponds always to an increased activity of these hormones which then become toxic.

*Concepts of Conditioning*—The outburst and the localization of a disease are determined by the presence of *conditioning factors*. The concept of conditioning is of great importance for it explains much hormonal behavior. During exposure to stressing agents, one organ will be affected more than another because of the interplay of conditioning factors which render this organ more vulnerable. An example already presented is that of a syndrome of malignant hypertension produced in rats by prolonged administration of DCA, but several months elapsed before the organic lesions appeared. If, however, the animal receives a diet rich in sodium, the disease will appear in a shorter period. If, in addition to DCA and sodium, one kidney is removed, within two weeks hypertension occurs and in three weeks lesions are visible in the kidney, the heart, and the blood vessels.

*Necessary Agent is DCA*—Neither sodium nor nephrectomy, alone or combined, can produce such changes. The necessary agent is really DCA, but the potency of this hormone is greatly increased by the presence of special conditions such as sodium in the diet and unilateral nephrectomy, which intensify the action of DCA (as if ten times the dose had been given). This illustrates the double possible origin of a hormonal pathology; namely, it can be due to an excessive secretion or it can be consecutive to a sensitization of certain tissues to

the action of even small amounts of hormone.

### General Considerations in Diseases of Adaptation

In the general concept of the diseases of adaptation, it is implied that the pathogenic agent is necessary for the production of a disease. Some of these agents, however, can be present without causing the disease provided the organism knows how to react, that is, enough but not too much. If the body does not "ignore" the presence of the pathogenic agent and defends too much, this agent then takes too much importance and provokes the disease.

*Example*—Asthma is a good example of this effect. Almost everybody carries in his bronchial tree impurities of all kinds, such as pollen and other allergens which normally are well tolerated. However, the organism of certain persons "thinks" that it must react against these dusts. An inflammatory reaction is thus initiated around these allergens, the bronchioli contract and an asthmatic crisis develops. This so-called defense reaction is clearly detrimental to the subject. It was not useful to raise an army against these innocuous invaders.

*Evidence Presented*—The results of a treatment with antiphlogistic hormones (ACTH, cortisone) in such conditions are evidence of the reasoning presented. The asthmatic crisis can be prevented or stopped although these hormones do not destroy the allergen but only block the so-called defense reaction of the organism.

*Situation Returned to Normal*—These hormones return the situation to normal by ordering the tissues to forget about the harmless aggressors. In general, the exaggerated reaction of the organism creates a favorable terrain for the development of a disease at the actual site where the pathogen is located.

301 *Henrietta Street*

## Fluoridation of Public Water Supplies and its Relation to Muscoloskeletal Diseases

**CHARLES LEROY STEINBERG, M.D., DWIGHT E. GARDNER, M.S., FRANK A. SMITH, PH.D., and HAROLD C. HODGE, PH.D., Rochester, New York**

### Summary and Conclusions

The fluoride content in parts per 1,000,000 of ash was estimated in 18 various bone samples from 14 patients with different forms of arthritis and from 1 patient who did not have arthritis, all of whom had ingested fluoridated water for a period ranging from three years and five months to four years and seven months. No excessively high concentration of fluoride was found in any of these cases.

*Results in Nonfluoridated Areas*—From residents of a nonfluoridated area 15 various bone samples of 11 patients with different forms of arthritis and 2 patients who did not have arthritis were analyzed for fluoride content expressed in parts per 1,000,000 of ash. The fluoride concentration value in bone of the resident and nonresident fluoridated water areas was not statistically different.

*Relationship not Demonstrated*—A careful review of the radiograms of both these groups, along with the bone fluoride studies, fails to reveal any relation between various forms of arthritis and the ingestion of fluoridated water as recommended by the health authorities.

Adapted from *New England Journal of Medicine* **258**:324 (Feb. 13) 1958.

## The Present Status of Surgery in the Treatment of Cancer

**GEORGE CRILE, JR., M.D., Cleveland**

I AM making very little change in my actual cancer techniques and treatments. I am taking much greater care, however, to prevent dissemination of cancer, because I view cancer as just as implantable as bacterial infection.

Finally, I think that if we all kept watching and looking at the variability of cancers in various organs and of the various cancers in the same organ, sooner or later we would be able to determine which should be treated by the most radical operation at the earliest possible date, which perhaps should not be treated at all, and which should be treated in the graded manner. Variability may be the key to the most effective treatment of cancer.

From *Postgraduate Medicine* **20**:124 (August) 1956.

# FORCED ERUPTION

## *Used in Preference to a Space Maintainer*

**ARNOLD D. STEINBERG, D.D.S., Evergreen Park, Illinois**

**DIGEST**

***This case history presents a step-by-step description of the procedure used in a case of extraction in a young patient to hasten eruption of the second bicuspid in order to avoid the use of a space maintainer. The progressive steps taken in the case are illustrated.***

### *Case History*

In a nine-year-old boy a carious and partly broken down lower left second deciduous molar had been giving the patient much pain. A fistula was observed close to the gingival crest. In this situation it was decided to extract the tooth rather than to attempt treatment to retain it. To avoid the use of a space maintainer, however, forced eruption of the second bicuspid was attempted.

### *Surgery Performed*

(1) A mandibular block was administered. (2) The second deciduous molar was extracted with forceps, exposing the roof of the bony crypt of the second bicuspid. (3) Removal of the roof of the crypt was accomplished by using a No. 702 bur to obtain the initial opening. (4) Using chisels, the bicuspid was exposed. (5) A No. 700 bur was used to create a groove around the crown of the bicuspid to facilitate the placing of a celluloid crown over the tooth. (6) Care was taken in the area adjacent to the first molar due to its proximity. (7) A celluloid crown was fitted for the bicuspid, filled with a thin mix of zinc oxide-eugenol, and placed in position over the tooth. (8) Excess zinc oxide-eugenol mix was allowed to escape by a small perforation on the occlusal of the celluloid crown. (9) A 2 by 2-inch gauze was placed over the socket and the patient was instructed to bite on this for the next hour in order to maintain the crown in position until the zinc oxide-eugenol mixture had set.

**1.** *X-ray study of the patient when first examined.*
**2.** *Twenty-four hours after surgery.*
**3.** *The celluloid crown is removed. The socket appeared well epithelialized.*
**4.** *The buccal cusp is barely visible.*
**5.** *First deciduous molar is shown undergoing resorption.*
**6.** *This x-ray view shows the second and first bicuspids nearly erupted.*

### Postoperative Progress

Within 24 hours the patient returned for x-rays and examination: he had experienced minimum pain and no bleeding had occurred. He was unaware of the presence of the celluloid crown. Radiographic examination revealed that the crown had slipped off the bicuspid but was maintained in the socket as a result of the constriction of the tissues around the rim of the socket. It was decided to allow the celluloid crown to remain in its present position since an unimpeded path would still be provided.

### Theory of Treatment

The reason for forcing eruption of the second bicuspid is to create a clear and open path for the tooth, so that the normal forces of eruption will be able to act. The use of a celluloid crown to maintain the socket opening permits epithelium to grow down into the socket and into the open crypt. Once this has been accomplished (in this case the crown was in place for two weeks) the crown may be removed.

*Eruption Stimulated* — The crown not only maintains an opening of the socket but also acts as a stimulant for the eruption due to the irritating effect of the surrounding tissues.

*Factors in Successful Treatment* — The only prerequisite for this procedure is that the crown of the permanent tooth be fully formed and the patient be cooperative.

*Time Required*—In six months the bicuspid had erupted into position thus eliminating the use of a space maintainer. The accompanying illustrations show the progress of the patient.

3214 *West* 103*rd Street*

## Fluoride vs. Nonfluoride Populations

**A. L. RUSSELL, D.D.S., Bethesda, Maryland**

1. The periodontal status of residents of three fluoride communities has been compared with the periodontal status of residents of three comparable low or non-fluoride communities. Ages of the persons studied ranged from 7 to 78 years. The domestic water supplies of the fluoride communities carried about 1.0, about 2.5 and about 8.0 parts per million of fluorides, respectively. Fluoride subjects had used the domestic water for from 7 to 44 years. Indirect evidence in two adult groups was opposite in direction. In each case the fluoride group exhibited the more favorable periodontal condition on direct examination.

2. Native school children in a series of communities, each with about 1.0 parts per million of fluorides in its domestic water, were compared with migrant children in the same communities. There was a weak tendency for the periodontal health of native children to improve, relative to that of migrants, as their advantage in water-borne fluoride consumption increased.

3. Most of the differences were slight. They are not adequate to support a hypothesis that use of a fluoride domestic water results in improved health of periodontal tissues.

4. The findings are wholly incompatible with any hypothesis that the periodontal tissues of children or of adults are harmed by use of a fluoride-bearing domestic water.

From *Bulletin of the American Association of Public Health Dentists* **17**:33 (May) 1957.

## Nonsurgical Treatment in Trigeminal Neuralgia

**JOSEPH C. RUSHTON, M.D., and HUGH N. A. MACDONALD, M.D., Rochester, Minnesota**

### Summary

Data regarding the effects of therapy in trigeminal neuralgia cannot be evaluated without knowledge of the spontaneous course of the disease. Analysis of 155 cases showed that 78 patients had experienced one or more spontaneous remissions lasting 6 months or longer and that 38 had had similar remissions of 12 or more months. This finding may have explained some reports of good therapeutic results from a variety of treatments, such as remissions lasting up to four years in 17 out of 39 patients after the extraction of apparently sound teeth. In patients who allowed many months to elapse before they sought treatment and who enjoyed long spontaneous remissions it could be assumed that the course of the disease would be somewhat benign. To tell whether a proposed treatment for trigeminal neuralgia is effective therefore requires a post-treatment observation period of at least six months and preferably a year.

From *Journal of the American Medical Association* **65**:437 (Oct. 5) 1957.

# GNATHOLOGIC *and* PERIODONTAL *Concept*

## *in Oral Rehabilitation—Part Three*

LEWIS B. UDIS, D.D.S., and EDWARD L. UDIS, D.D.S., Philadelphia

**DIGEST**

***In this installment, the last of a series of three illustrated articles, the authors emphasize that completion of a case of oral rehabilitation is postponed until all the factors in the case are considered favorable. The completion of the restorations on individual dies prepared from reinforced copper tube rubber base impressions is discussed. Hydrocolloid impressions are used only for temporary restorations and master models. Techniques for completion of a case on the Gnathoscope are described.***

### *Completion Techniques*

The treatment of the case presented in the two previous articles has progressed to the stage of evaluation for final procedures. After twelve months, the tissue and teeth were ready for the completion of the restorations: (1) The teeth responded favorably to radiographic and vitality examination, (2) all pockets and mobility were eliminated, and (3) a physiologic gingival architecture was achieved. The case was considered ready for completion.

### *Impression Technique*

The following preliminary steps are taken:

1. Carefully contoured annealed copper tubes are reinforced with compound.

2. The tubes are annealed to prevent distortion.

3. Compound is used to reinforce the exterior of the annealed tubes but does not come in contact with the impression medium.

4. Stops are prepared in the compound to prevent the tubes from extending beyond the gingival sulcus and to prevent distortion during setting of the impression media.

5. Overextension of the tube will tear the periodontal fibers and may result in a recurrence of the pockets.

*Preparation for Tube Impression*—(1) The tubes for a full arch are prepared and properly marked for identification.

(2) The inner surface is cleansed with alcohol and coated with a suitable rubber adhesive.

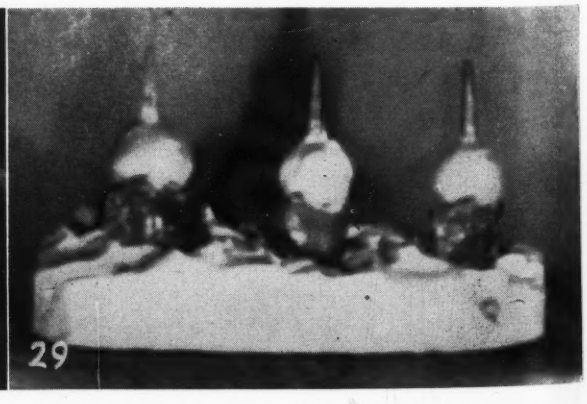
(3) The rubber base impression material is mixed as prescribed by the manufacturer and all impressions are individually completed (Fig. 28).

*Preparation of Dies*—(1) The impressions are seated in a plaster base to facilitate pouring the dies.

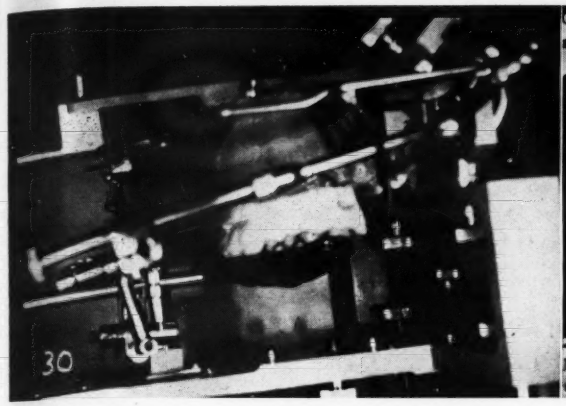
(2) Rubber base impression material is dried and an accurate die stone is poured with a stem to facilitate handling.

(3) The dies are impregnated with diethelene glycol to aid surface hardening (Fig. 29).

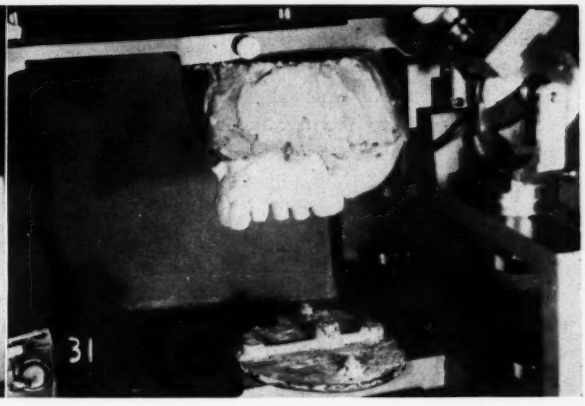
**28.** *Reinforced copper tube rubber base impression.*




**29.** *The impressions are seated in a plaster base to facilitate pouring the dies.*



**30.** *The orbital transfer relates the master maxillary cast to the Gnathoscope.*



**31.** *The maxillary cast has been attached to the Gnathoscope in preparation for articulation of the mandibular cast to centric relation.*

*Advantages of Stone Dies*—The following are some of the advantages provided by the use of stone dies:

1. Waxing of margins is facilitated on a properly prepared stone die.

2. Simplicity of technique eliminates many steps which can incorporate errors.

3. Stone dies can be prepared for use within one hour.

## Preparation of Master Cast

Hydrocolloid, properly conditioned and used, will provide a master model that can be depended upon for the accuracy necessary for the assembly of precision internal attachments.

*Consistant Results Obtained*—The accuracy of the hydrocolloid and rubber base impression media is standardized by reputable manufacturers to assure consistent physical characteristics.

*Marginal Accuracy Secured*—The wax pattern is fabricated on the master cast resulting from the hydrocolloid impression and must be interchangeable with the die resulting from the tube impression. The fabricated wax patterns are placed on the individual dies for completion of the marginal fit.

*Preparation of Wax Bite*—The following steps are taken:

1. An accurate bite wax is tempered in warm water and properly prepared for use. The patient is instructed and guided to close in centric relation.

2. The wax is removed and examined. It should not disclose any piercing. If piercing is present it indicates tooth contact which could result in obtaining a false relationship.

3. The wax is chilled gradually in refrigerated water and replaced in the mouth to recheck the bite and to eliminate distortion resulting from chilling.

4. This process is repeated with the rechecking of bite and cooling until all distortion is completely eliminated and the arc of closure can be completed several times in centric relation without producing an error in the wax bite.

*Centric Relation*—Centric relation is the terminal hinge position in which the hinge axis is constant to both the skull and the mandible. This position is located when the head of the condyle is in the most unstrained distal position of the glenoid fossae.

*Mounting of Casts*—The maxillary cast is mounted on the Gnathoscope, utilizing the axis orbital transfer. The mandibular cast is mounted in centric relation to the maxillary cast. With the completion of the mounting, the articulator is set to conform to the

**32.** *Castings have been seated in a plaster matrix in preparation for transfer to the investment model.*

**33.** *Investment model prepared for final soldering.*

patient's registrations (Figs. 30 and 31).

*Incisal Guidance*—The incisal plate is set to conform to the treatment plan indicated for the protrusive and lateral protrusive requirements. Mounting of the casts in relationship to the patient's hinge axis allows for increasing and decreasing the vertical height on the instrument. This adjustment can be made within the physiologic requirements of the patient's freeway space.

*Wax Patterns*—1. The master casts have been articulated in centric and in relation to the axis orbital plane.

2. The Gnathoscope has been set to conform to the patient's registrations.

3. The vertical height and incisal guidance have been properly adjusted on the instrument.

4. The wax patterns are carved to conform to the factors enumerated which are the patient's individual requirements for an articulated occlusion.

5. The completed patterns are removed from the master cast to allow for final correction of the margins on the individual dies.

*Investing and Casting Technique*—1. Hydroscopic investment allows for accurate control of multiple wax patterns. Complete accuracy of laboratory technique is absolutely essential to secure perfect castings.

2. An accurate burn-out oven will maintain the critical control of the invested patterns in preparation for final casting.

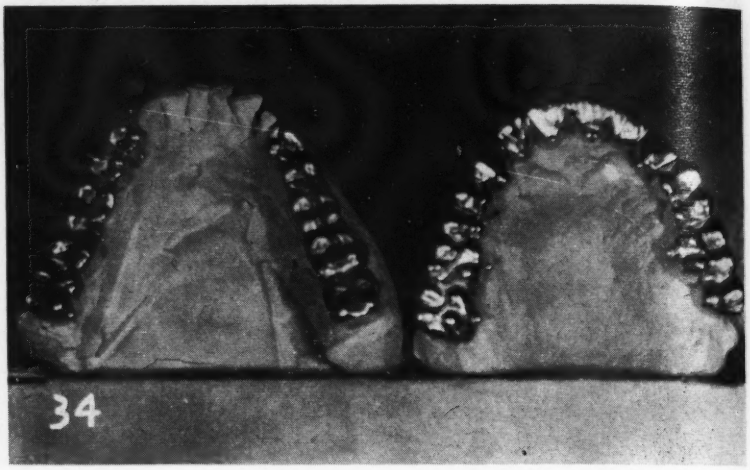
3. Castings are completed, using an electric melt of gold in a centrifugal machine.

## Assembly of Castings on Teeth

1. Individual castings and the castings carrying pontics are placed on the teeth and tapped gently into position.

2. The castings are removed and examined to disclose any existing burnished spots which indicate resistance to perfect positioning.

3. The castings are sand-blasted and returned to the prepared teeth for recheck. This measure is repeated until all the castings and pontics are seated accurately.

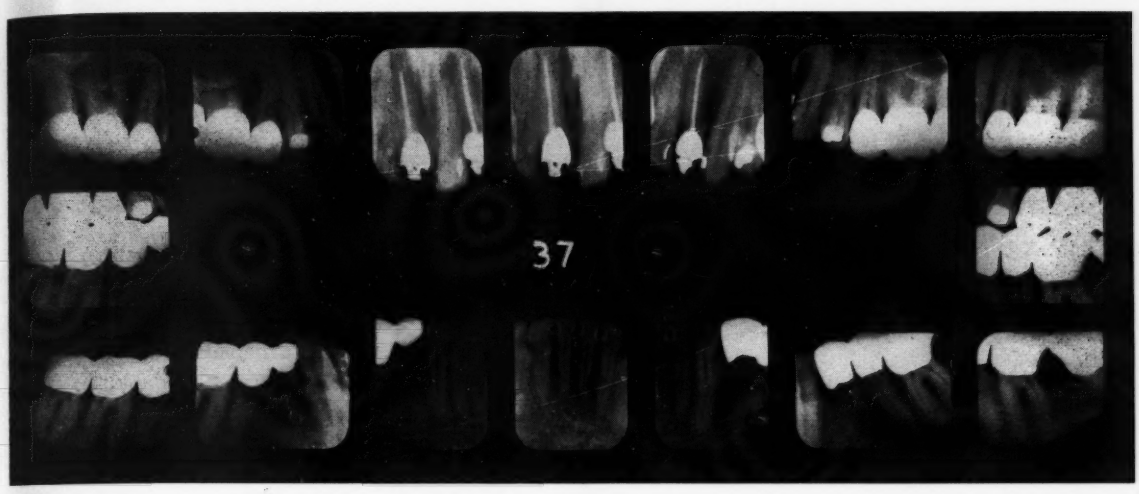



**34.** ***Completed castings are assembled for remounting on the Gnathoscope for the final check.***

*Radiographic View of Seated Castings*—Radiographic examination of the marginal fit of all castings is completed before final assembly. Individual castings that are not perfect are replaced at this stage in the procedure (Figs. 32 and 33).

*Assembly of Castings*—(1) A plas-

**35 and 36.** ***Postoperative views of completed oral rehabilitation.***




**37.** ***Postoperative radiographs showing marginal adaptation of restorations.***

ter index of the unilateral segments is prepared for investment and soldering.

(2) Splinting of a complete arch requires three indexes for soldering of the individual segments for the complete splint.

(3) The procedure outlined is adopted to reduce the possibility of incorporating error when a large mass of plaster or investment material is used.

(4) Splinting is utilized only for the stabilization of mobile teeth. Teeth which are not mobile are not splinted.

*Remounting of Castings for Final Examination*—(1) All assembled and soldered units are placed in the mouth for final remount.

(2) An axis orbital transfer and centric bite is completed.

(3) Hydrocolloid impressions are taken of both arches into which all the castings are placed for the pouring of master models.

(4) The remounted castings are checked on the Gnathoscope against the patient's records for final adjustment (Fig. 34).

*Permanent Cementation*—(1) The completed restorations are placed on the teeth free of any binder for twenty-four hours prior to permanent cementation. This procedure will allow for the exposure of the gingival sulcus in preparation for cementation.

(2) Radiographs are taken after the permanent cementation to check for the thorough removal of all excess cement (Fig. 37).

## Summary

The occlusal reconstruction in the finished case described in this article was the result of information obtained from the patient's diagnostic records. These records were transferred to the Gnathoscope upon which the restorations were fabricated in harmony with the patient's hinge-axis and condylar movements. Proper incisal guidance provided the cusp height necessary to establish lateral protrusive movements free of prematurities. The cusp height was determined by the requirements of the relationship of the incisal segments. The lateral excursions maintained cuspal contact throughout, without interference on either the working or balancing sides.[7]

Treatment was determined by the requirements of the case which established the need for employing subgingival curettage, gingivectomy, gingivoplasty, or osteoplasty. The individual techniques indicated are applied in each case. Splinting is used only where mobility exists. All completed cases are permanently cemented. The authors believe that only with the proper use of Gnathologic procedures can an articulated occlusion be achieved.

5409 *Germantown Avenue*

[7]Udis, Edward L., and Udis, Lewis B.: New York J. D. **27**:221-227 (June-July) 1957.

## *Etiology of Viral Hepatitis*

**W. PAUL HAVENS, JR., M.D., Philadelphia**

BECAUSE of the carrier rate and the relative resistance of hepatitis virus to heat and other physical and chemical agents, it has been recommended that every parenteral penetration be performed with instruments sterilized by boiling in water for 30 minutes, or with steam under increased pressure (15 to 20 pounds) for 20 minutes, or with dry heat (180 Centigrade for one hour).

From *Journal of the American Medical Association* **165**:1091 (November 2) 1957.

# *A New Maneuver in the Reduction of* MANDIBULAR DISLOCATION: *Report of a Case*

ROBERT A. ATTERBURY, B.S., D.D.S., Oak Park, Illinois

**DIGEST**

***Mandibular dislocation may be either bilateral or unilateral. The dislodgement of the condyle from the glenoid fossa may be partial or complete resulting in a forward, backward, upward, or outward dislocation. Forward dislocation of the condyle is the more common form. The other three forms are rare and usually occur in connection with a fracture. This case report describes a technique for the reduction of a forward mandibular dislocation which succeeded after the customary method had failed.***

## Method in Common Use

The method most frequently used requires the exertion of force by the operator's thumbs on the occlusal surfaces of the molar teeth. This technique has several disadvantages sometimes resulting in damage to the operator's fingers. The force possible to apply this method is governed by the position of the operator, with no accompanying leverage. Moreover considerable pressure is sometimes required to reduce the mandible. This is frequently not obtainable in a controlled manner. In the following case report a different technique for reduction of a difficult mandibular dislocation was successfully used.

## Case Report

A 29-year-old housewife was referred for reduction of a forward bilateral mandibular dislocation. The patient stated that after opening wide during a yawn the previous day she

**1.** *Lateral view showing left condyle displaced forward and locked in front of the articular eminence.*

**2.** *Lateral view showing right condyle displaced forward and locked in front of the articular eminence.*

**3.** ***Anteroposterior view revealing an anterior open bite as a result of the forward dislocation of the condyles.***

was unable to close the mouth and experienced difficulty in speaking. Until this incident the jaw had always closed in a normal manner. Manipulation, applied before the initial visit, had failed to restore the joint to its normal position.

*Examination*—Examination revealed a patient with the mouth open and fixed, with the chin protruded. The muscles of mastication appeared tense and the patient was unable to close the mouth. She complained of pain and spoke with difficulty.

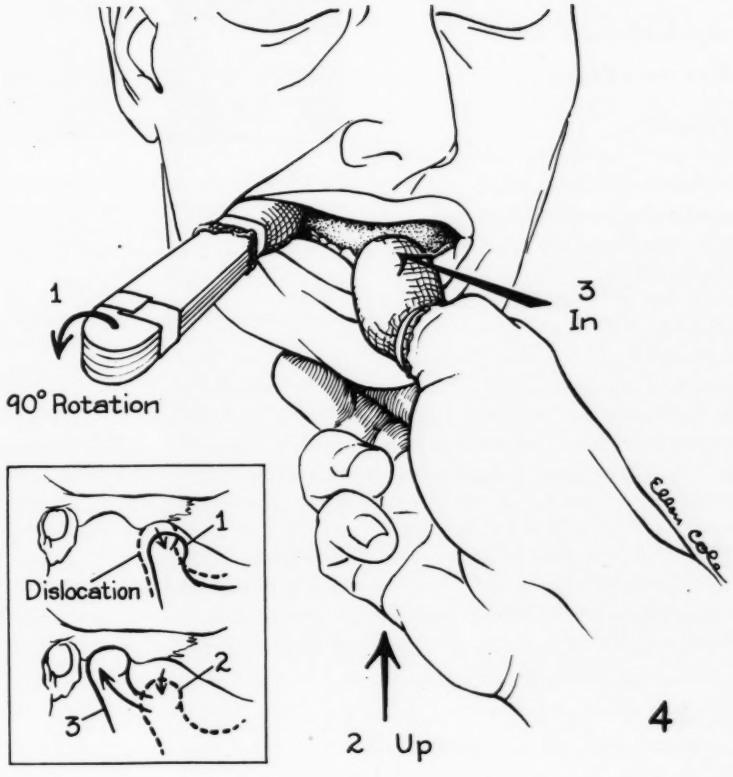
*Roentgenographic Examination*—Roentgenographic examination demonstrated both condyles locked in front of the articular eminence (Figs. 1, and 2). The anteroposterior view revealed an anterior open bite as a result of the forward dislocation of the condyle (Fig. 3).

### *Surgery*

Since the customary technique had failed to reduce the dislocation, it was believed that another approach should be attempted. The following steps were included:

1. Several tongue blades which had been padded on one end with gauze and adhesive tape were used. The padded end was inserted between the occlusal surfaces of the molar teeth on one side. Another padded tongue blade was inserted on the opposite side to produce a bilateral force. The patient having been sedated, the tongue blades were inserted at an angle.

2. Pressure was applied externally in an upward direction on the chin and the tongue blades were slowly rotated as if turning a key in a lock. The condyles were guided back into




**4.** ***Showing padded end of several tongue blades with gauze inserted between the occlusal surfaces of the molar teeth. Pressure is applied on the chin externally, as indicated by arrows. The tongue blade is slowly rotated to guide the condyle into proper position.***

their proper positions in the glenoid fossa (Figs. 4, 5, and 6).

3. Because of the possibility of a recurrent or chronic luxation and subluxation after the reduction, both temperomandibular joint cavities were injected with Intracaine® in oil and a modified chin-cup with upward traction was applied.[1]

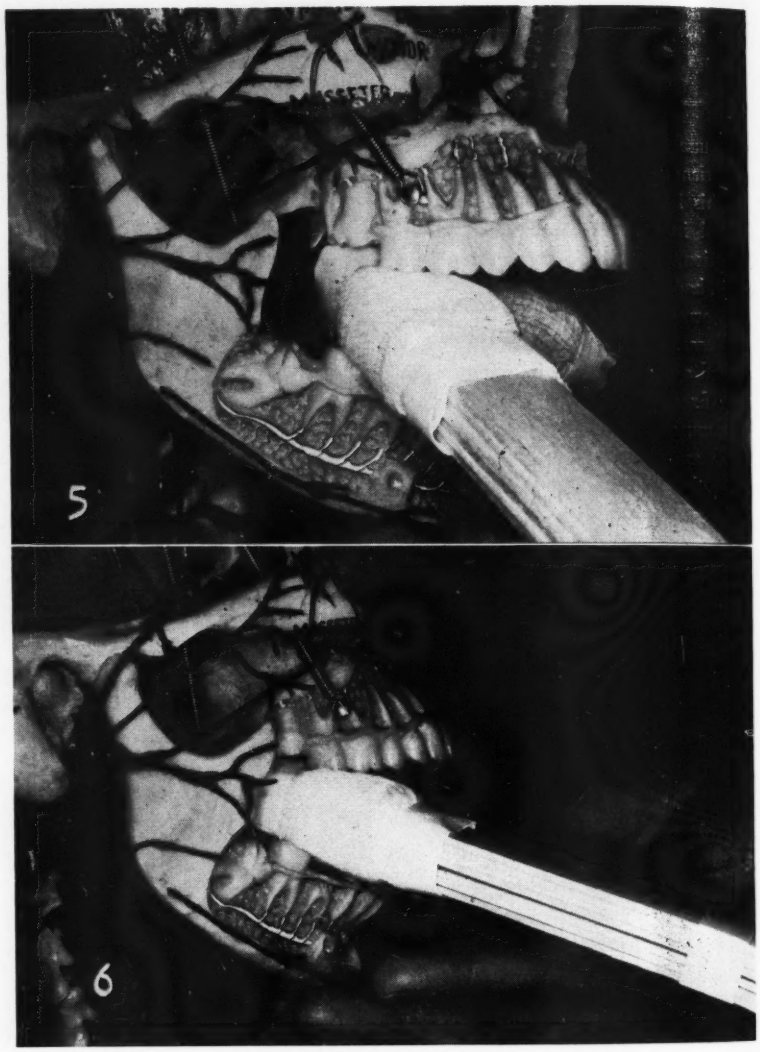
### Comment

Using padded tongue blades, a controlled pressure is utilized in guiding the condyle back into its proper position in the glenoid fossa. This technique is simple and not taxing for the operator; much force can be exerted. Application of external pressure to the chin by the operator or assistant, while the tongue blades are being turned, permits control of movement.

This method has been utilized with good results, especially in this instance where the force from the operator's thumbs proved insufficient to reduce the dislocation.

1011 *Lake Street*

[1]Schultz, Louis W.: Curative Treatment for Subluxation of Temporomandibular Joint, JADA **12**:671 (June) 1925.




**5.** ***Showing the padded tongue blades inserted between the occlusal surfaces of the molar teeth to produce an equal bilateral force.***
**6.** ***Pressure in an upward direction on chin while rotating the tongue blades guides the condyle back into the glenoid fossa.***

## Aphthous Stomatitis

### Problem

FOR THE past six or seven years, a 21-year-old man has had recurrent ulcerative stomatitis. There are intervals of perhaps a week or so when his mouth is relatively clear of ulcers; but at other times his mouth becomes quite sore, with ulcers on the tongue, mucous membrane of the lips, roof of the mouth, and as far back as the throat. Every type of local treatment has been tried. At present, vitamins are being used and smallpox vaccinations every five to seven days for a total of 10 vaccinations; however, thus far, the results have been disappointing. Is there any other treatment which might be effective?

### Discussion

Opinions vary in the matter of the condition described. Aphthous stomatitis commonly results from an allergic reaction. When a patient is troubled to the extent described, it is advisable to conduct a careful survey of the particular foods which, when ingested, appear to cause the oral ulcerations. Chocolate, nuts (especially pecans), certain fruit juices and, at times, excessive amounts of carbohydrates are usually responsible.

Cortisone has been known to bring about considerable temporary improvement in some cases of aphthous stomatitis.

Adapted from Your Questions Answered, *Postgraduate Medicine* **23**: A-20 (January) 1953.

# The EDITOR'S Page

FACIAL pains are common and they are often severe. The dentist is frequently the first to be consulted for an evaluation of pain in the face. Diseases of the dental pulp, disturbances in the occlusion, and trauma in the temporomandibular joint are common sources of facial discomfort. Pulpal irritation or infection can usually be discovered by clinical and roentgenographic examination. Disturbances of the occlusion can ordinarily be detected by having the patient bring the teeth together by rapidly repeated maneuvers. Trauma in the temporomandibular joint is usually accompanied by tenderness or noise during excursions of the mandible.

There are other causes of facial pain that the dentist should consider in arriving at a definitive diagnosis. There are both extracranial and intracranial disturbances. George W. Smith, M.D.[1], of the division of Neurological Surgery, Medical College of Georgia, has listed six common extracranial conditions, four intracranial causes, several extraneous disturbances, and the common neuralgias —all must be considered in the interpretation of some facial pains.

*Extracranial*

"1. The pains of dental or acute pulpitis are of short duration, throbbing, altered by thermal changes within the mouth, and increased with the recumbent position. The ache is generally dull and can be recognized as a toothache.

"2. Tumors or infected cysts of the mandible should be considered and ruled out. Although such lesions may cause early pain, they subsequently show evidence of paresthesia and, ultimately, anesthesia.

"3. Malocclusion and temporomandibular arthritic states and temporomandibular joint syndrome (Costen's syndrome) may produce pain which can be excluded by simple test maneuvers of chewing and manipulation.

"4. Neuralgia associated with paranasal lesions is generally well localized and combined with acute or chronic infection. When the sphenoid or ethmoid sinuses are involved, the aching is usually of a constant dull character behind and between the eyes, and the pain associated with frontal or maxillary sinuses is directly over and referable to the sinuses involved. Rarely are the pains of the shooting type that would be confused with the nerve tic pain.

"5. Occasionally, lancinating pains in the ear and lower jaw can be produced from an elongated styloid process, but this is associated with a deep soreness in the throat and dysphasia. Such pain can be reproduced by an examining finger pressed against the styloid process, from within the tonsillar fossa.

"6. Not an uncommon cause of facial pain is the nasopharyngeal tumor, either the carcinoma or the lymphoepithelioma which starts high in the lateral pharyngeal fossa (Rosenmuller's recess), grows beneath the mucosa, extends along the base of the skull, and involves first the maxillary division of the 5th cranial nerve and then the mandibular branch as well as the 9th and 10th cranial nerves further along the base. These tumors are very insidious in their growth; they are difficult to locate diagnostically, and they frequently are not apparent until they have actually invaded and destroyed the base of the skull at the foramens through which the nerves emerge. Frequently these tumors will cause the pain, then after a period of pain the tumor mass will subsequently compress the nerve sufficiently that hypesthesia or anesthesia is seen and replaces the pain."

*Intracranial*

1. Tumors involving the gasserian ganglion and branches of the fifth nerve.

2. Other tumors in the brain case that produce weakness of facial structures in addition to pain.

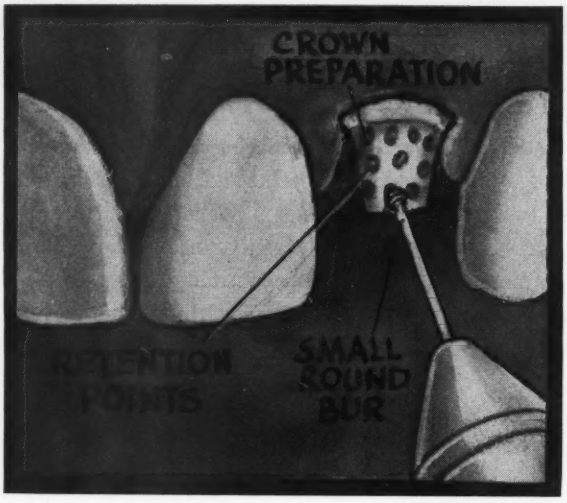
3. Aneurysms of the circle of Willis at the base of the brain that encroach on rootlets of the cranial nerves.

4. Aberrant or tortured cerebral arteries that produce pressure on cranial nerves.

Smith also mentions the dental and jaw pains that are often associated with coronary artery disease, and the suboccipital and lateral head pains that accompany cervical disc protrusions.

Trigeminal neuralgia is usually so typical and so excruciating that it presents no diagnostic problem. The atypical facial neuralgias are not so clear-cut and often present a diagnostic challenge. Smith believes that many cases of atypical facial neuralgia are associated with a personality disorder and must be evaluated in psychosomatic terms.

[1]Smith, George W.: Diagnosis and Treatment of Facial Pain, JAMA 166:860 (February 22) 1958.



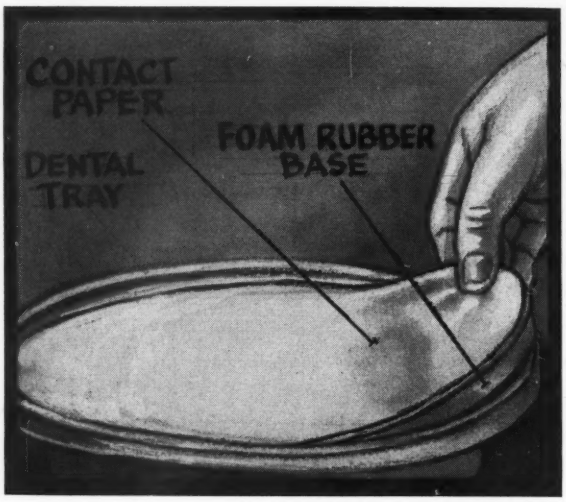

1

# *Clinical and Laborator*

### Cementation of Short Jacket Crowns

**Thomas E. Perrin, D.D.S., Ferndale, Michigan**

**1.** Make the usual type of preparation. Before cementation use a small round bur to make 15 to 20 shallow retention points on the preparation.

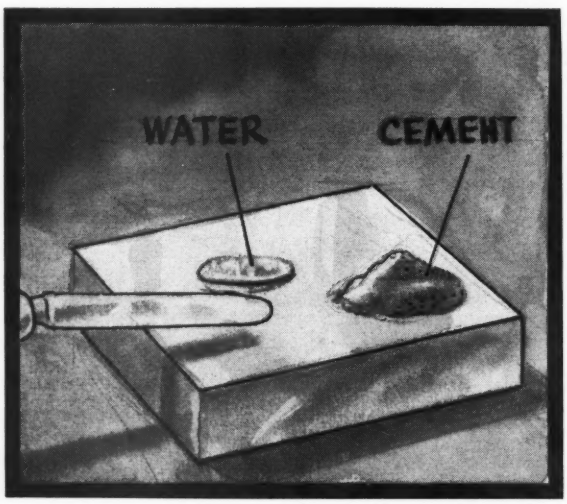



2

### Noiseless Tray Cover

**S. M. Dooreck, D.D.S., Brooklyn, New York**

**2.** To reduce the noise when instruments are placed on the glass bracket tray, cut a piece of one-quarter inch foam rubber to fit the tray. The paper bracket covers are placed over this rubber mat.




3

### Shade Guide for Crown Cements

**Ole Korsbrekke, D.M.D., Aalesund, Norway**

**3.** To determine the proper shade of cement to use for a jacket crown, first mix the cement powder *with water* and try the crown in place.

### READERS *are Urged to Collect $10.00*

For every practical clinical or laboratory suggestion that is usable, DENTAL DIGEST will pay $10.00 on publication.

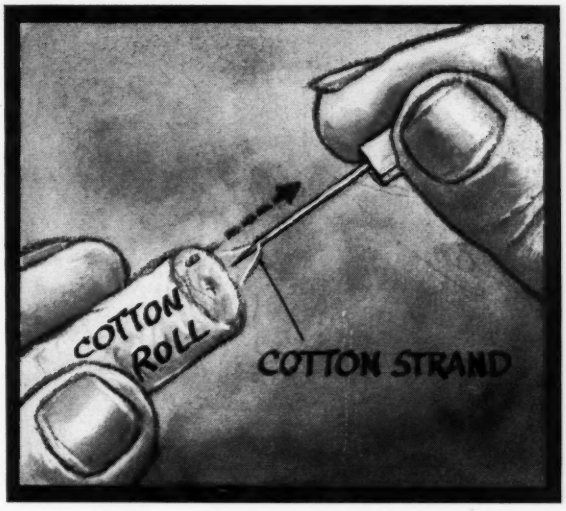
You do not have to write an article. Furnish us with rough drawings or sketches, from which we will make suitable illustrations; write a brief description of the

# SUGGESTIONS . . .

### Testing the Point of a Needle

**S. Traunstein, D.D.S., Brooklyn, New York**

**4.** Only a sharp needle point should be used for an injection. Before the needle is sterilized, test the point by inserting in a cotton roll. The slightest "hook" on the point will offer resistance and will pull out filaments of cotton when the needle is withdrawn.

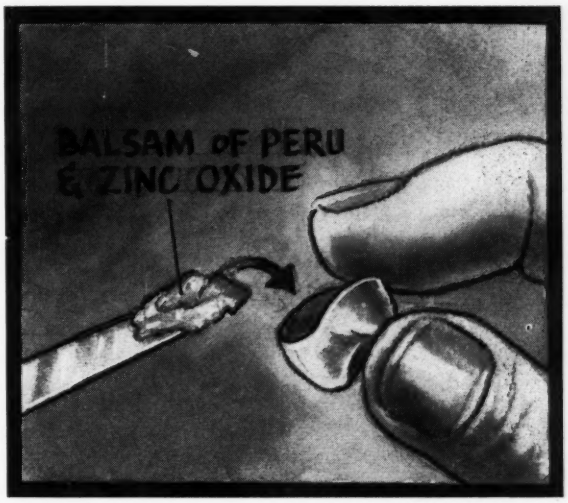



4

### Temporary Cementation of Acrylic Restorations

**Julian Ambrose, D.D.S., Islip, New York**

**5.** A mixture of zinc oxide and Balsam of Peru is used for temporary cementation of acrylic restorations. Unlike eugenol, Balsam of Peru does not soften acrylic.

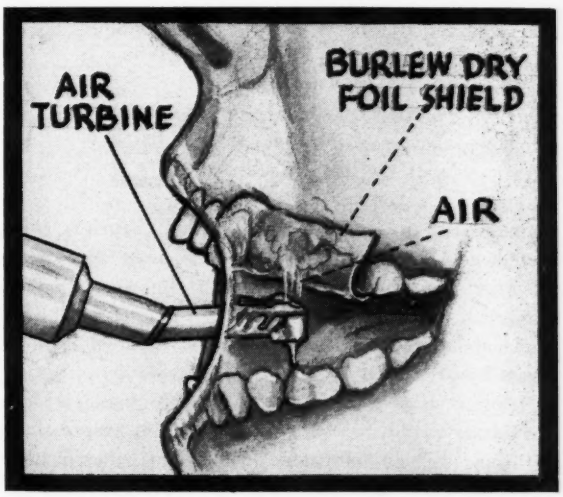



5

### Protection of Teeth When Using An Air-turbine

**Daniel Gordon, D.D.S., Wilkes-Barre, Pennsylvania**

**6.** Occasionally, the teeth in the opposing jaw are sensitive to the air that is released during the operation of the air-turbine. Covering the teeth in the opposing jaw with Burlew dry foil eliminates this problem.

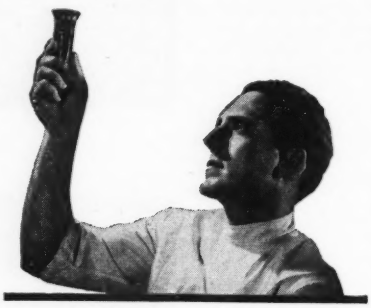



6

technique involved; and jot down the advantages of the technique. This shouldn't take ten minutes of your time. Turn to page 236 for a convenient form to use.

Send your ideas to Clinical and Laboratory Suggestions Editor, DENTAL DIGEST, 708 Church Street, Evanston, Illinois.

# MEDICINE and the Biologic Sciences



### Drug Sensitivity

The most frequent mechanism of drug dermatitis is hypersensitivity. The common allergic reactions are most often responsible. Platelet agglutination from Sedormid® and quinine may cause purpura. Arsenic may release a direct chemical reaction involving sulfhydryl groups in the skin. Arsenicals may also have a carcinogenic effect.

Usually the diagnosis can be established by history. The relation between the ingestion of a drug and appearance of the eruption may be coincidental. If the rash disappears when the drug is withdrawn the diagnosis is almost established. Recurrence when the drug is given again is confirmatory but repeated administration risks serious or even fatal reactions. Skin tests are of little diagnostic importance. Blood counts may show eosinophilia, thrombocytopenia, or more serious dyscrasias.

The character of the eruption may provide a clue to the offending drug. Sera such as antitoxin produce urticaria, serum sickness, and occasionally anaphylaxis. Small doses should be used initially in atopic patients.

Drug eruptions are found in 5 per cent of patients taking sulfonamides. Morbilliform and scarlatinoform rashes are most common. Isoniazid and PAS may cause morbilliform or maculopapular eruptions. Streptomycin reactions often subside with continued administration of the drug in tuberculous patients.

Penicillin may cause urticaria, angioneurotic edema, erythema, or a maculopapular rash. Sudden death from anaphylaxis after penicillin injections is becoming increasingly common. The drug should be administered with caution in patients with previous allergic diseases, especially those with former eruptions. Erythromycin and tetracyclines rarely cause a skin reaction.

Metals such as gold, mercury, and arsenic may produce exfoliative dermatitis as well as many less serious eruptions. Phenobarbital characteristically produces morbilliform or scarlatinoform eruptions. Acne-form eruptions are common after bromides and iodides. Exanthema, bullous and urticarial reactions and fungating ulcerative or hemorrhagic granulomas may also be associated with halogen ingestion.

Most drug eruptions subside when the exciting medication is withdrawn. Antihistamines are effective for urticaria, but otherwise usually do not relieve pruritus.

---

*Moynahan, E. J.: Drug Eruptions, Practitioner* **176**:510-519 (*July*) 1956.

### Pruritis Ani

Pruritus ani is a source of great annoyance and embarrassment and at worst may become so distracting as to result in suicide. Because the perianal skin is so rich in sensory nerve endings, it is particularly liable to itching. If the itching is persistent, progressive skin changes leading to lichenification occur.

Pruritus is a modified sensation of pain and, although produced by a weaker stimulus than pain, it may be more intolerable than the pain produced by a stronger stimulus. This is the basis for scratching, which by denuding the skin substitutes tolerable pain for itching. There is some question as to whether an idiopathic form of pruritus ani exists or whether all perianal itching is secondary to some cause that in the idiopathic case is not readily discoverable.

The known causes are intestinal parasites, fungi, psychosomatic conditions associated with nervous tension, digestive disorders, vitamin deficiency, menopause, local diseases of the anus, rectum, vagina and vulva, and allergy. Food allergies and direct contact with various irritants should not be ruled out. Sulfonamides, antiobiotics, and local anesthetics of the "caine" type are highly sensitizing in some patients. Also psychosomatic influences may be contributory.

It is important to consider the state of mind of the patient, because this disease may destroy morale and produce depression and drive the patient into complete seclusion. It may be necessary to prescribe salicylates or barbiturates. Morphine should be avoided, but if the patient's morale is low one of the new tranquilizers may help. Spiced foods and alcohol should be avoided. Application of local anesthetics has no effect, because these drugs do not penetrate the unbroken skin. Antihistamines likewise do not penetrate the unbroken skin and therefore, are of no value.

---

*Editorial: Pruritus Ani, JAMA* **162**:732 (October) 1956.

### Chronic Alcoholism—Treatment

Acute alcoholic states are phases of chronic alcoholism. Abrupt withdrawal is necessary. Anxiety, restlessness, and tremor are controlled by adrenocortical steroids, and chlorpromazine and Rauwolfia serpentina derivatives. The agents decrease the incidence of nausea and vomiting, barbiturate intoxication, and delirium tremens.

Adequate oral feeding can usually be instituted promptly. Vitamin deficiences, dehydration, and organic diseases should be corrected. Use of vitamins B and C for at least the first few days is desirable. Long-range rehabilitation should always be attempted. Total abstinence is probably the only solution to a drinking problem.

Rehabilitation of the personality, relief of stress, and correction of physical defects contribute toward the goal of abstinence. Therapists should not show hostility, anger, or disdain.

Complete avoidance of alcohol is the main therapeutic consideration. Associated psychotherapy is supportive and not aimed at developing insight. Alcoholics Anonymous urges the problem drinker to face up to his weakness and rebuild a productive pattern of living.

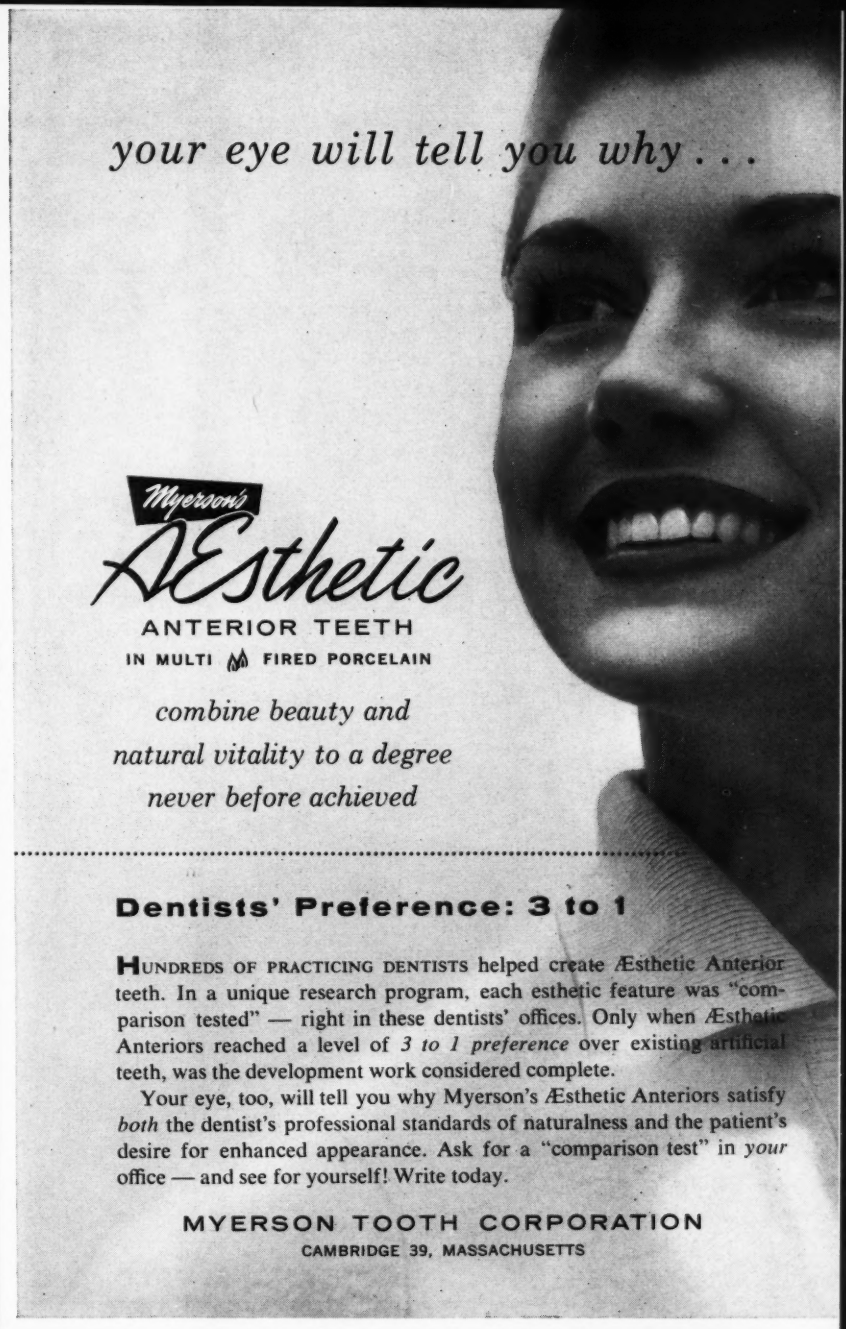
Antabuse therapy inhibits the oxidation of alcohol producing an unpleasant physical reaction. Since a period of two to seven days is required for complete elimination of the drug, a cooling-off period is provided for sudden impulses to drink. Antabuse is often successful and a valuable adjunct to psychotherapy. Antabuse can be used for almost all alcoholics despite concomitant disease. Low dosages and use of antihistamine as an antidote increase safety of the agent.

Conditioned reflex therapy creates an aversion to alcohol through association of drinking and emetine-induced vomiting. Probably a true conditioned reflex against so complex a phenomemon as abnormal drinking is impossible. Results of combined reflex of psychotherapy regimes are no better than for psychotherapy alone.

Psychotherapy is based on the idea that alcoholism is a symptom of an emotional disturbance. No treatment of alcoholism will be successful without a psychologic approach.

---

*Feldman, Daniel J.: The Treatment of Chronic Alcoholism: A Survey of Current Methods, Ann. Int. Med.* **44**: 78-86 (*January*) 1956.


your eye will tell you why . . .
Myerson's
Æsthetic
ANTERIOR TEETH
IN MULTI FIRED PORCELAIN
combine beauty and
natural vitality to a degree
never before achieved
Dentists' Preference: 3 to 1
HUNDREDS OF PRACTICING DENTISTS helped create Æsthetic Anterior teeth. In a unique research program, each esthetic feature was "comparison tested" — right in these dentists' offices. Only when Æsthetic Anteriors reached a level of 3 to 1 preference over existing artificial teeth, was the development work considered complete.
Your eye, too, will tell you why Myerson's Æsthetic Anteriors satisfy both the dentist's professional standards of naturalness and the patient's desire for enhanced appearance. Ask for a "comparison test" in your office — and see for yourself! Write today.
MYERSON TOOTH CORPORATION
CAMBRIDGE 39, MASSACHUSETTS

## *Infections and Travel*

Today travel to the tropical areas is reasonably safe. This is so because of the improved health programs in tropical countries with emphasis on sanitation, immunization, antibiotics, and insecticides.

All travelers to tropical areas must have been recently vaccinated against smallpox and also immunized against typhoid, paratyphoid, and tetanus. Diphtheria immunization is recommended for children under 6 years and for all Shick-positive persons under age 35. Cholera and plague vaccinations are usually given by local health authorities if the diseases are prevalent in the area.

Yellow fever immunization is required for travelers to South and Central America, Africa, and Asia if the traveler has passed through Africa. Ceylon, India and Pakistan prohibit entry unless yellow fever vaccine was given twelve days before arrival. These vaccines may not be

(*Continued on page* 230)

NOW SIS

AND EVEN MOM

AND EVEN EVEN GRANNY

HAVE PEARLON SMILES

PEARLON 57

PEARLon — THE PERFECT ANTERIOR FILLING MATERIAL

1. INSOLUBLE IN MOUTH FLUIDS — EVEN HCl
2. HARD — CONTAINS MOLECTITE
3. STRONG — CONTAINS FIBERGLAS
4. RIGID — A MINERAL PLASTIC
5. SAFE — (PH 6.9) NO ORTHOPHOSPHORIC ACID
6. COLOR STABLE — MEETS A.D.A. SPEC.
7. FLUORESCENT — MEETS TELACAST STANDARDS
8. FLUORATED — CONTAINS FLUORIDE

SEND $1.00 FOR GENEROUS SAMPLE

Amco

AMERICAN CONSOLIDATED MFG. CO., INC.

835 N. NINETEENTH STREET • PHILADELPHIA 30, PA.

easily available to the family physician and may be received at a United States Public Health Service Clinic or quarantine station. Vaccination does not provide absolute protection and is no substitute for hygienic precautions.

Contaminated water and food cause diarrhea, food poisoning, bacillary dysentery, typhoid and paratyphoid fevers, amebic dysentery, intestinal amebiasis, cholera, roundworm, whipworm, trichinosis, and tapeworm.

Foods, particularly meat, milk and fish, spoil rapidly in tropical climate unless refrigerated. Cooked foods kept at ambient temperatures are excellent culture media for bacterial growth. Slight initial bacterial contamination from skin infection, respiratory secretions or intestinal discharge can produce highly dangerous infestation within only a few hours.

Parasites in meat from infected animals are transmitted to man unless the food is thoroughly cooked. Fresh milk, butter, or ice cream can be contaminated. Root and leafy vegetables may be polluted by sewage or drainage water used for rinsing or by excrete used in the fields as fertilizer.

Infection can be averted by using only boiled water and milk and thoroughly cooked meat and by not eating sherbets, ices, ice-cream, soft cheeses, uncooked vegetables, custard pudding, cold pastries, meringues, melons, and raw fruits with thin skins.

The anopheline mosquito transmits malaria and is the most medically important insect of the tropics. Other species of mosquitoes may transmit yellow fever, filiariasis, and dengue in endemic regions.

Prospective travelers should obtain travel kits from physicians for emergency use. Drugs for symptomatic therapy should include aspirin, Chlor-Trimeton® tablets and 1 per cent cream, Thorazine® or Apolamine®, paregoric and Cremalin® tablets. Prophylactic substances should consist of Bonamine®, Bio-Band adhesive strips, Aralen®, Diodoquin® tablets, Desenex® powder and in some instances iodine water purification tablets. Terramycin crystalline tablets, 250 milligrams, should be included for anti-infection therapy.

---

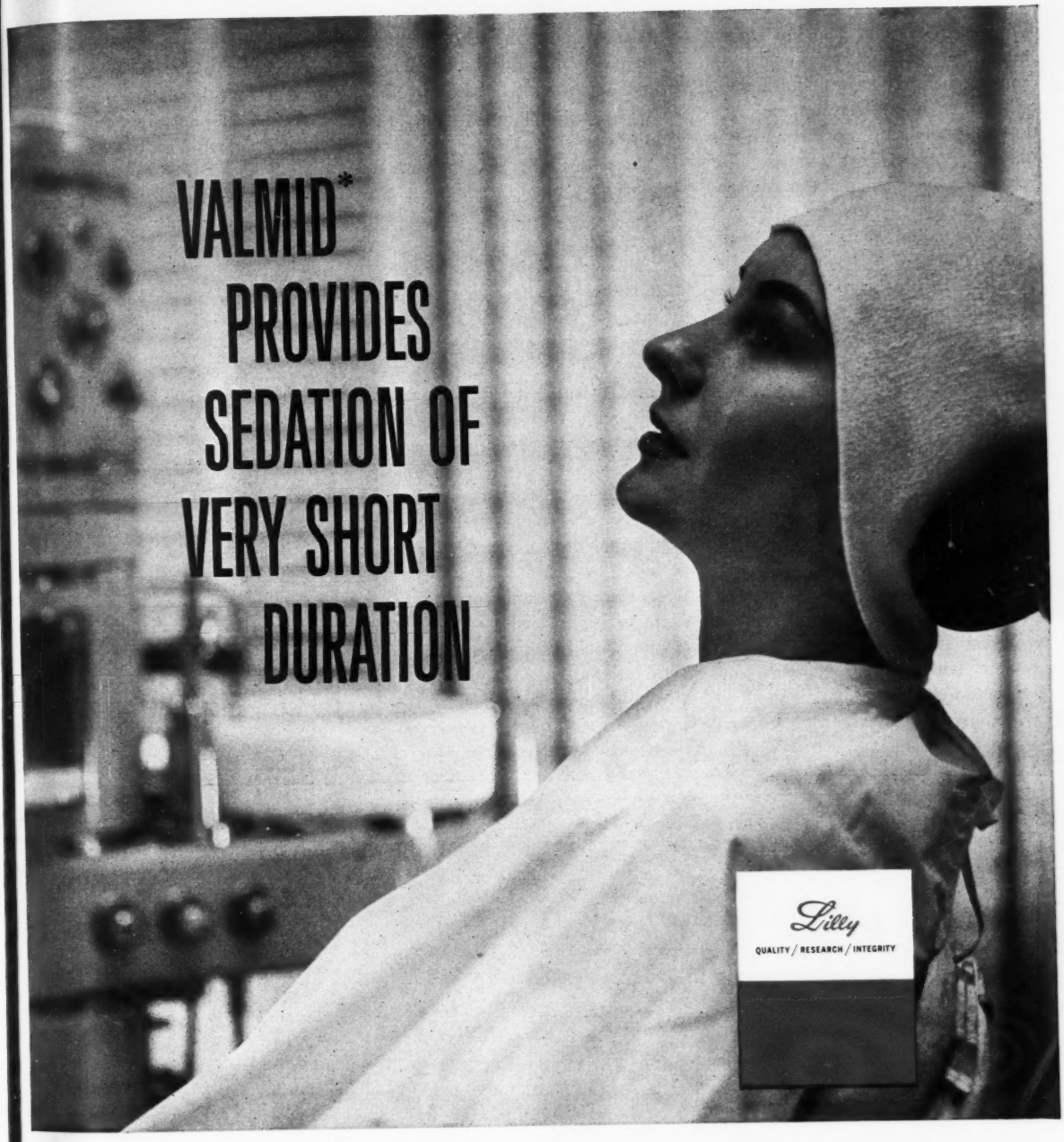
*Loughlin, Elmer H.:* Infections and *Travel, Internat. Rec. Med.* **158**:500-505 (*December*) 1955.

## *Allergy in Children*

Early recognition and proper management of allergic disease in infants and children may modify or prevent major allergic disease in later life. Allergic cripples usually result from neglected allergic problems. Allergic children should be able to lead normal lives and grow and develop the same as nonallergic children.

Many children with hay fever, asthma, eczema, or other forms of major allergy have had previous allergic symptoms, undiagnosed and untreated. There is a definite chronologic order in the development of these syn-

(*Continued on page* 232)




## for more relaxed treatment sessions—

When apprehensive, jittery patients make dental procedures difficult, 'Valmid' offers you a safe nonbarbiturate sedative particularly useful for your practice. Its effect disappears completely after about four hours ('Valmid' is shorter acting than any orally administered barbiturate) without causing "hang-over," drowsiness, or depression. 'Valmid' assures you a wide margin of safety, even in patients with liver or kidney damage, for whom barbiturates are contraindicated.

Prescribe 1 or 2 tablets twenty to thirty minutes before treatment.

Supplied as Tablets 'Valmid,' 0.5 Gm. (7 1/2 grs.), in bottles of 100.

*'Valmid' (Ethinamate, Lilly)

Lilly
POLIO VACCINE

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U. S. A.

824002

dromes. The infant who has eczema may later have allergic colds and coughs, then hay fever and asthma or any other allergic symptoms. Adequate prophylactic measures must be instituted early. If untreated, allergic symptoms may return at any time due to excessive exposure to the primary offending allergens, or secondary factors.

Allergic diseases affect about one-third of the patients in the pediatric age group. Ordinary medical treatment without recourse to special allergy tests can be successful in at least 50 per cent of the cases. Difficult problems should be managed by the physician who has been adequately trained in allergic procedures.

The pathology of allergic disease consists of edema of mucous membranes and certain areas of skin, spasm of smooth muscles, such as bronchi or intestine, and excessive secretion of mucous glands. Any organ or tissue may be affected. This accounts for the variety of signs and symptoms that may simulate so many diseases.

Allergy in infants can usually be recognized within the first few months. About 82 per cent of cases are diagnosed by 4 months of age and 90 per cent by 1 year of age. Approximately 10 per cent of allergic persons manifest primary allergic symptoms after 1 year of age. These infants are predisposed to major allergy such as hay fever or asthma in later years.

A rash of the face or other parts of the body is the most common early manifestation in more than one-half of these patients. At least 1 of every 3 infants with allergy had pylorospasm with persistent vomiting or spitting up and about one-fourth of the babies have severe gastrointestinal distress with persistent colic, gas, diarrhea or constipation. Several symptoms often occur in the same patient. Cow's milk allergy in infants is a classic example of the many slight to severe, ordinary to bizarre, common or baffling symptom complexes which may involve virtually any system of the body. When the diagnosis of milk allergy is correct, the infant will be almost completely relieved within twenty-four to forty-eight hours after cow's milk is removed from the diet.

As the allergic infant grows older, his symptoms which are chronic and periodic, may shift to another tissue or organ. The patient has the same symptoms for months or years. Symptoms follow a definite pattern and often can be pinpointed as to time, place, weather, events, foodstuffs, or seasons.

---

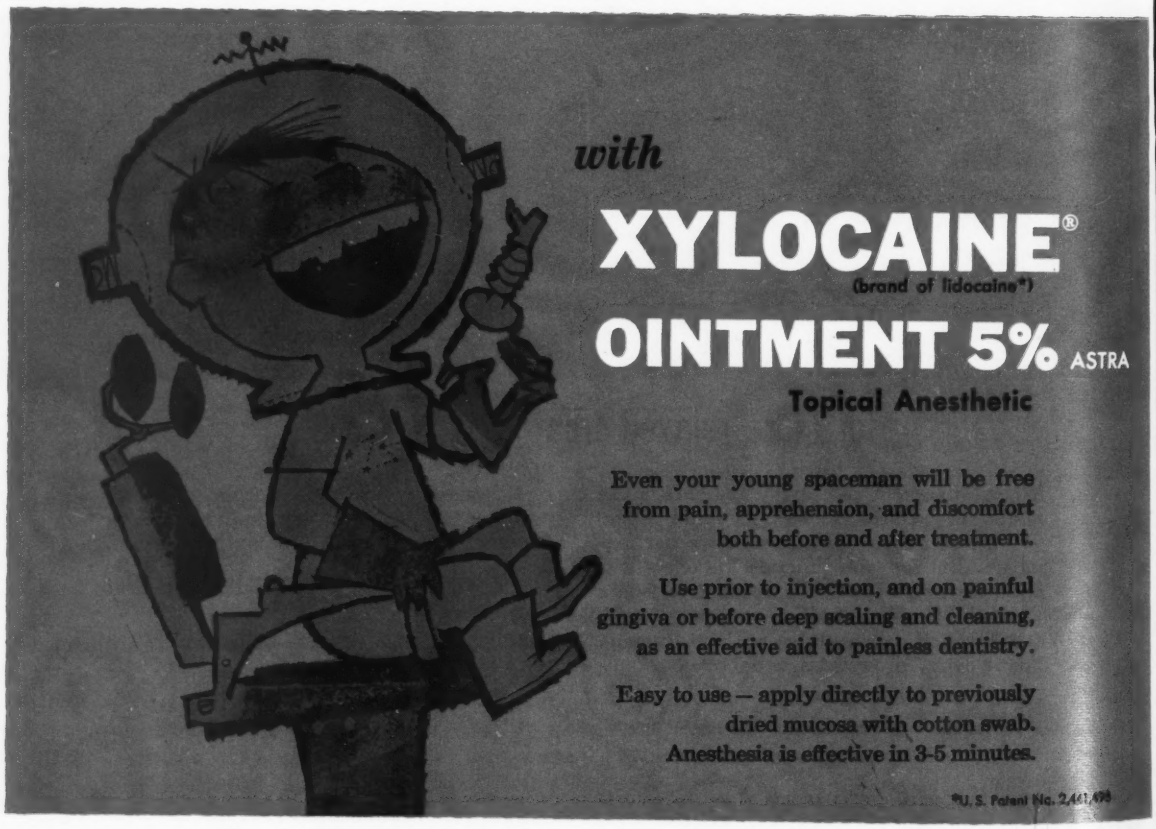
*Clein, Norman W.: Allergy in Infants and Children, Mod. Med.* **24**:69-75 (*February* 1) 1596.


**BUY**

**SECURITY**

**BONDS**




with
XYLOCAINE®
(brand of lidocaine*)
OINTMENT 5%
ASTRA
Topical Anesthetic
Even your young spaceman will be free from pain, apprehension, and discomfort both before and after treatment.
Use prior to injection, and on painful gingiva or before deep scaling and cleaning, as an effective aid to painless dentistry.
Easy to use — apply directly to previously dried mucosa with cotton swab. Anesthesia is effective in 3-5 minutes.
*U. S. Patent No. 2,441,498

# Contra-Angles

### *Skill and Effort*

In the United States we are constantly engrossed in methods to increase business productivity. Time and motion studies are made by efficiency engineers to determine if workers are producing with minimum effort and with maximum output. In Great Britain similar studies of methods are made by work-study engineers.

Dentistry, being a highly individualistic enterprise, has not been too prompt to study work methods. Some dentists spend a lifetime stooped in grotesque operating positions, working with outmoded equipment, in light that is abdominable, in cramped quarters, and end their days in utter fatigue and with little to show for their inefficient methods. The spirit of individualism and free enterprise is so rife among dentists that any suggestion, from any quarter, to improve working conditions is likely to fall with a thud upon deaf hearing receptors and often upon hostile ears.

As one of the last of the individualists the dentist wants nobody to tell him his business. His colleague, the physician, is hectored from all sides and feels the hot breath of regulations of his efforts through the various control boards that patrol hospital practice. When the physician enters his workshop, the hospital, he is no longer the free agent that he used to be. His records of diagnoses and treatments are checked by review boards and committees all along the line. This means that there is a form of standardization in every hospital despite how valiantly the physician tries to preserve the image of himself as an independent dispenser of services.

In addition to a group of colleagues looking over his shoulder to check the accuracy of his diagnoses and the outcome of treatment, the physician is required to work in surroundings over which he has little direct or personal control. Equipment is bought for hospitals on specifications and to fit the requirements of the greatest number of conditions and the needs of the largest number of staff members. The idiosyncrasies and the foibles of the few are not given too much consideration.

The equipment that is bought on specification is placed in areas and in special rooms that are planned by the blueprints of architects and not by the wishes of physicians.

The physician works in the hospital under conditions that are specified by rules and regulations. Hanging overhead is the board of directors who manipulate the finances and thereby exercise final control and have the last word on everything. The most chilling cut to the medical ego is the constant awareness that this group

(*Continued on page* 234)

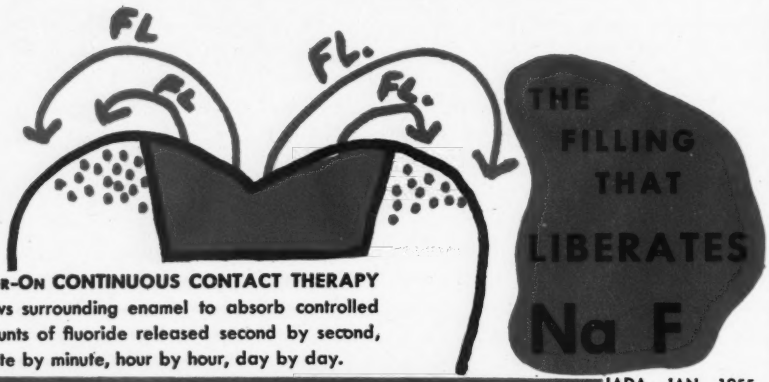
XYLOCAINE OINTMENT 5% ASTRA

- Is a powerful and enduring surface anesthetic.
- Is nonsensitizing.
- Does not inhibit healing processes.
- Is completely stable.
- Is water soluble.

Astra Pharmaceutical Products, Inc.
Worcester 6, Mass., U. S. A.

XYLOCAINE OINTMENT
*for better doctor-patient relationship*

HELP PREVENT TOOTH LOSS WITH FLUORON




FLUOR-ON CONTINUOUS CONTACT THERAPY allows surrounding enamel to absorb controlled amounts of fluoride released second by second, minute by minute, hour by hour, day by day.

JADA JAN. 1955
JADA MAR. 1955
JADA JUNE 1955
JADA SEPT. 1955
JADA MAY 1957
JDR JUNE 1955

FLUORON

PERMANENT FILLINGS DECIDUOUS TEETH

TREATMENT FILLINGS PERMANENT TEETH

PERMANENT CEMENT FOR INLAYS BRIDGES CROWNS —

SEND $1.00 FOR GENEROUS SAMPLE

AMERICAN CONSOLIDATED MFG. CO., INC.

Amco

835 N. NINETEENTH STREET • PHILADELPHIA 30, PA.

of directors is made up of laymen with the "chief layman" in the form of the superintendent.

Our medical friends are not disposed to speak too often or in loud tones in public over this "lay" domination of hospital practice. To be too outspoken might lead to unpleasant incidents and even possible dismissal from the hospital staff. It has happened! A boycott or lockout of this kind can end any medical career. Modern medicine, unlike modern dentistry, cannot be practiced in an office. Medical progress made the hospital the most effective organization for health care. The physician now finds himself caught in the trap that he built so well.

Like so many aggressions and hostilities that man holds locked within himself, the woes and frustrations of our medical confreres are often released by the cup of cheer. The cliques and claques within the hospital walls may be exposed under the anesthesia of alcohol, with full and detailed identifications in unflattering detail. Behind the dramatic "life and death" facade of the hospital there are often feuds and tempers and quiet desperation.

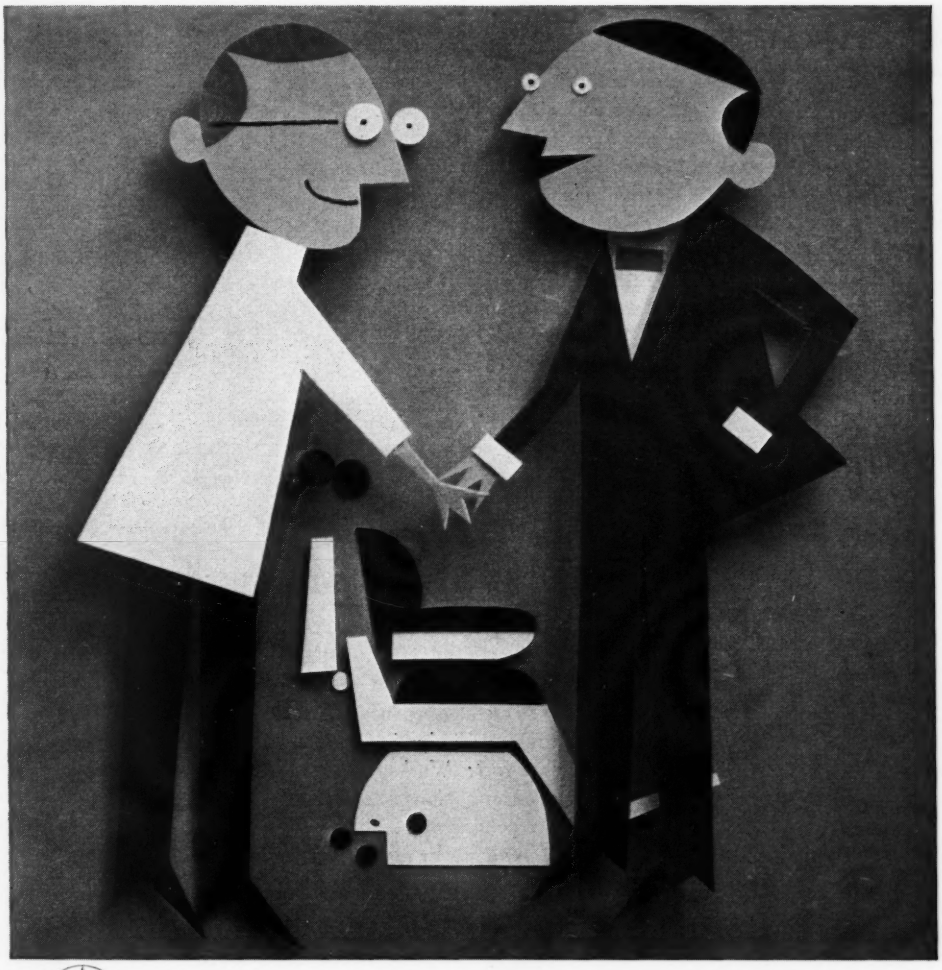
The present-day physician knows that his days of independence are running low. The hospital is big business. The hospital controlling board is composed of astute business men. Professional societies and committees set the standards and enforce conformity. Insurance companies and insurance forms make incessant demand upon the physician's time. And the shadow behind the whole scene is that of Uncle Sam, the Great White Father, the Grand Largess of the Universe.

The dentist *so far* is still the Little King in his independent domain. He selects his location, designs his own office to suit his fancy and his pocketbook, buys his own equipment and tools of livelihood, engages his own employees—then goes to work. With the exception of the benevolent and seldom-prying eye of the State Board of Dental Examiners, the dentist has few controls imposed upon him. There are no superintendents, boards of directors, committees checking his work. Uncle Sam is not too interested in him, except to collect his taxes and to be certain that the dentist has fulfilled his military obligation.

Because the dentist is so free and independent, he may not be disposed to set high enough standards for himself. Only his conscience and his collection of skills stand between him and the public. If his conscience is deficient, God help the public. If his skills are in short supply, the same deplorable state for the public welfare will exist. Whether the conscience can be developed is a matter for philosophers and theologians to answer. That skills can be developed by effort and application is attested every day by earnest dentists who study hard without force of compulsion or regulation.

An important area of development in skill and effort was presented by Doctor Russell Jackson, a former senior lecturer at Witwaterstrand University before the Society for the

(*Continued on page* 236)



Yes . . . every doctor uses XYLOCAINE HCl in his difficult dental procedures because it provides fast acting, deep and profound anesthesia, and because reinjections are only rarely required. Since it is safe, certain and clinically nontoxic, the use of XYLOCAINE HCl is justified over a much wider range of local anesthetic indications. Try XYLOCAINE HCl . . . for infiltration . . . for nerve block . . . or for topical use. See for yourself how such versatility will benefit your practice.

ASTRA PHARMACEUTICAL PRODUCTS, INC., WORCESTER 6, MASSACHUSETTS, U. S. A.

**XYLOCAINE® HCl** INJECTABLE SOLUTION

(brand of lidocaine*)

***for better doctor-patient relationship***

*U. S. Patent No. 2,441,498

CLINICAL AND LABORATORY SUGGESTIONS

(*See pages 226 and 227*)

Form to be Used by Contributors To: Clinical and Laboratory Suggestions Editor

DENTAL DIGEST
708 Church Street
Evanston, Illinois

From: _____

Subject: _____

Explanation of Procedure:

Sketch:

Suggestions submitted cannot be acknowledged or returned.

$10 will be paid on publication for each suggestion that is used.

Advancement of Anesthesia in Dentistry (Great Britain).

Doctor Jackson condensed a paper of 450 pages into a presentation of *five* minutes:

***Skill***

"*Poorly skilled:* A clumsy man, new to the work, confused by his errors and with no confidence.

"*Fair skill:* Misfits who have been doing the job for a long time, somewhat clumsy, very often repairing mistakes and patching work.

"*Average skill:* Reasonably accurate, confident, knows instruments, has no hesitation.

"*Excellent skill:* Smoothness of performance and coordination of mind and hand."

***Effort***

"*Poor effort:* The operator kills time, lacks interest, resents suggestions, works slowly and lazily. Has poor lay-out of equipment, may work more accurately than needed and uses wrong or poor instruments.

"*Fair effort:* Not quite as bad, accepts suggestions grudgingly. Attention wanders, has too much mental worry. May be affected by such things as late hours and dissipation.

"*Average effort:* Works steadily, accepts suggestions, plans ahead and works with a good system.

"*Good effort:* Little or no time lost, interested in work, works at best pace for particular endeavor. Conscientious, encourages criticism, makes suggestions: steady and reliable.

"*Excessive effort:* Extends himself to a pace impossible to maintain. The best efforts from all viewpoints but his own."

***Working Conditions***

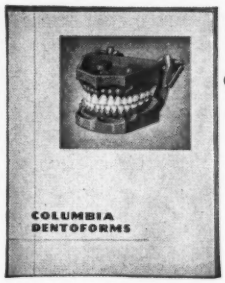
"During the last few years I have come to consider this a most important factor. For example the management of a factory removed a few girls on repetition work to a smaller room from the main factory. Their output rose considerably; apparently they thought they had been specially selected, so gave of their best skill and effort. As our American friends would say, they had been 'motivated.'"

Another speaker, Alan Thomson, said:

(*Continued on page 238*)

CHINESE PROVERB

"One picture is worth more than ten thousand words." . . . If true, then Columbia Dentoforms speak volumes.




If you do not have our Catalog No. 33, illustrating various Aids in Patient Education, write for your copy today.

COLUMBIA DENTOFORM CORP.
"The House of A Thousand Models"
Also Headquarters for Brown Precision Attachments

131 East 23rd Street
New York 10

OUR 41st YEAR

Atlantic City's Newest Convention Hotel

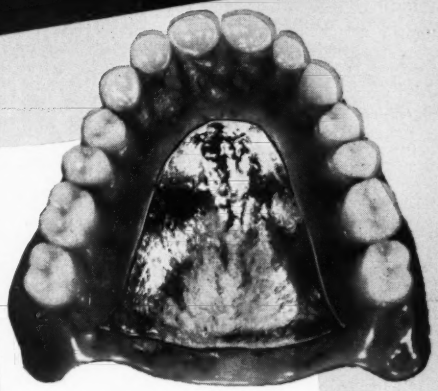
The Jefferson with its new facilities for handling all convention groups is fast becoming Atlantic City's most popular convention hotel.

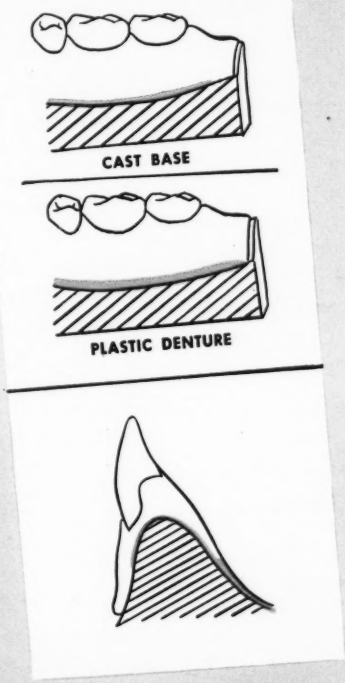
The Jefferson features an abundance of Meeting, Banquet and Exhibition Rooms fully equipped to handle your every need. Experienced personnel. Location ideal in heart of Atlantic City.

WRITE • PHONE • WIRE TODAY FOR DESCRIPTIVE LITERATURE

Convention Manager
Hotel Jefferson
Atlantic City, N. J.

# ADVANCED PROSTHETICS






## Vitallium®
### CAST FULL BASE

**FOR FORM STABILITY . . . FULL NATURAL PALATAL DETAIL . . . EXTRA THINNESS . . . INSTANT THERMAL CONDUCTIVITY**

New and advanced methods reproduce every fine palatal detail on tissue and tongue side. These details are retained throughout the processing procedure, even to final polishing.

New methods produce thin castings, providing instant thermal conductivity, maximum strength and form stability. An acrylic post-dam permits rebasing when necessary and forms a firm seal against tissue.

- The uniformity of thin-gauge Flexseal® sheets and their affinity for the especially prepared refractory model make possible Vitallium palates of thinner gauge than heretofore possible (28 gauge).

• • •

- A smooth continuation of metal, denture material and teeth is achieved. Maximum tongue room is assured with no interference with speech.

ANOTHER ADVANCED PROSTHETIC SERVICE OF The Vitallium Laboratories

**AUSTENAL, INC.**
New York Chicago

® By Austenal, Inc.

insist on
Cloverleaf
PLASTERS and STONES
STURDIROCK
Ideal for mouth rehabilitation work . . . High strength, hard surface dies and models
HYDROSET
Finest texture stone—fast setting—8-10 minute initial set
CLOVERLEAF X
A precision plaster—extremely fine texture—8 minute initial set
Also, Flasking Compounds . . . Investments . . . Specialties
Ask your dealer's representative for our line—
Guaranteed to satisfy—or return for full credit
Prices FOB Newark or Chicago
JAY E. HEALEY CO.
21 Baldwin St., Newark 2, N.J.

PRECISION IIIII MASTERPIECE
$12.50

•BS•
POLISHING ANGLE
Though modestly priced, the BS Polishing Angle is unsurpassed in excellence of materials and workmanship.
Shorter than usual (Illus. actual size) due to no latch, but parts are full size. All stainless steel and non-corrosive materials, moving parts hardened for longer wear. No square or sharp edges. Even children's posterior teeth are easily reached without discomfort. Fully guaranteed.
Furnished for Doriot hand pieces with bushing for hexagonal nose hand pieces if specified, $1.00 extra.
BS Polishers and Brushes available.
ORDER FROM YOUR DEALER
Young Dental Mfg. Co., St. Louis 8, Mo.

"The other point I feel as basic is the amount of time we waste—or spend uselessly—in many operations. The example I offer here is the average impaction. The amount of bone to be removed is small—perhaps half a cubic centimetre. If this could be done mechanically as a bench job it would take but a few seconds using the right tools. Under present operative techniques most of the time is spent mopping and looking, and cutting odd pieces of wrong or right bone, and changing not quite suitable instruments. In fact fighting the problems of visibility and access. A most profitable investigation for an inventive mind would be the improvement of retractor design. Each operation was individual, but a few standard retractors had to suffice for all. The improvement of retractors, of lighting, of vision generally, and of suction, would do a great deal to shorten operative and anesthetic time."

Every dentist should examine himself and discipline himself to improve his skill and to reduce his effort. He owes that to his patient and to himself. As to his conscience, he can do no better than to remember the words that Doctor Jackson quoted from one of the most forthright writers of the ages, Saint Augustine:

"Men go abroad to wonder at the height of mountains, the lofty billows of the sea, the long course of the rivers, the vast compass of the oceans, and the long circular movement of the stars . . . and yet . . . they *pass themselves by*."

—E. J. R.

FIGHT CANCER
AMERICAN CANCER SOCIETY

## *Hospital Infections Due to Antibiotic Resistant Staphylococci*

**H. TAYLOR CASWELL, M.D., KENNETH M. SCHRECK, M.D., W. EMORY BURNETT, M.D., ELSIE R. CARRINGTON, M.D., NORMAN LEARNER, M.D., HOWARD H. STEEL, M.D., R. ROBERT TYSON, M.D., and WILLIAM C. WRIGHT, M.D., Philadelphia**

### *New Organism Resistant To Wonder Drugs*

In the early days of the antibiotic era when it appeared that the problem of infectious disease had been forever solved, an occasional voice was heard predicting the possibility that as a result of the use of these antibiotics a new breed of organism would result which would be resistant to the so-called wonder drugs. This prediction has proved to be correct for both gram-positive and gram-negative organisms.

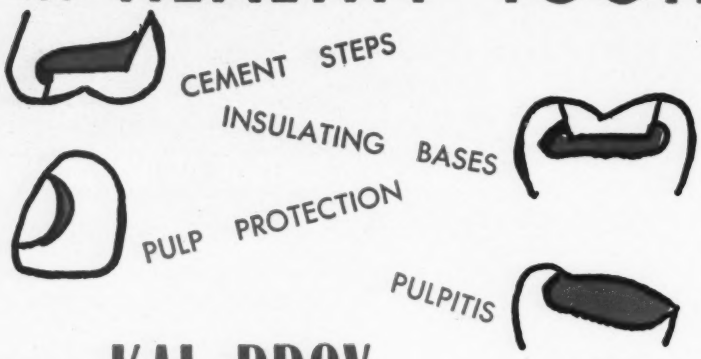
*Significant Problem*—At the present time, the most significant problem with antibiotic resistant organisms is that of the antibiotic resistant Micrococcus pyogenes var. aureus (hereafter referred to as Staphylococcus aureus). Increasing numbers of reports of these organisms as the cause of hospital infections are appearing in the literature both in this country and abroad. Infections with these organisms do not constitute a serious problem in the general population. They do, however, present a serious problem in hospitalized patients.

*Source of Infection in Variety of Situations*—There is no doubt that many of our modern institutions are infested with them. They have been reported as being the source of infections in clean surgical wounds, in newborn nurseries as cutaneous infections, in postpartum nursing mothers as breast abscesses, in the respiratory tract as staphylococcic

(*Continued on page* 240)

fast
antibiotic
action—orally
NEW BENEFITS for
QUICKER CONTROL OF DENTAL INFECTIONS
PLUS OUTSTANDING FEATURES
UNSURPASSED TRUE BROAD-SPECTRUM ACTION
SUSTAINED THERAPEUTIC BLOOD LEVELS ON ONLY
4 CAPSULES A DAY—MINIMAL SIDE EFFECTS
A PARTICULARLY USEFUL ADJUNCT
TO ACCEPTED DENTAL TECHNIQUES
Available as 250 mg. (blue-yellow) capsules (do not contain sodium).
Dosage is 4 capsules per day for the average adult.
For office use, or on your prescription.
ACHROMYCIN V Capsules may
be obtained from any pharmacy.
Achromycin V
... an aid to,
not a
substitute
for,
good
dentistry
remember the V when specifying ACHROMYCIN V
Achromycin V
CAPSULES

# A VITAL TOOTH IS A HEALTHY TOOTH




PLACE **KAL-DROX** UNDER ALL FILLINGS

U. S. P. CALCIUM HYDROXIDE

**KAL-DROX**

1. SETS HARD — QUICKLY
2. A PROTECTIVE LINER
3. A COMPLETE BASE
4. FOR ROUTINE USE UNDER ALL FILLINGS

Amco

*SEND $1.00 FOR GENEROUS SAMPLE*

**AMERICAN CONSOLIDATED MFG. CO., INC.**
**835 N. 19th Street, Philadelphia 30, Pa.**



# BINDERS

*available for immediate delivery.*
*Each holds a complete volume.*

Price, **$4.00**, Postpaid

**(Postage extra for shipment to other countries)**

**DENTAL DIGEST** 1005 Liberty Ave. Pittsburgh 22, Pa.


pneumonia, in severe types of enteritis in postoperative surgical patients, and in cutaneous infections involving nonsurgical hospital patients and hospital personnel.

*Infection Widespread*—The true extent of this problem is not known but it is certainly far more widespread than can be ascertained from the literature. Conversation and communication with physicians from widely scattered institutions in this country have revealed hospital infections with these organisms to be nationwide. Institutions which do not perform routine bacteriological studies, including antibiotic susceptibility tests, on all infections and which do not closely evaluate infection rates may not be conscious of the prevalence of these organisms.

Adapted from *Surgery, Gynecology and Obstetrics* **105**:6 (Jan.) 1958.

## *Fluophosphate in Table Salt Might Control Dental Caries*

A NEW fluorine compound, sodium monofluophosphate, which is said to be one-third as toxic as sodium fluoride and which can be added to table salt, was described at a meeting of the European Organization for Research on Fluorine and Dental Caries Prevention in Malmő, Sweden.

It was reported that the new compound in solution does not quickly break down into free fluoride ions but rather into a complex ion that is highly stable. Salt fluoridation to control dental caries, it is stated, is more practical in some areas than water fluoridation.

Production of a well-balanced fluoridated salt is fairly simple, it was reported, and its use would offer a safer guarantee against overdosing than fluoridating water.

From Medicine Abroad, *Scope Weekly* **2**:No. 3 (Aug. 14) 1957.

## Therapeutic Hypnosis

HYPNOSIS is used more frequently in dentistry than in other therapeutic practices. A light hypnotic state has been described as most satisfactory for dental procedures. In some dental case histories the patients' apprehension had caused them to delay in seeking dental care, and, because of this, many required extensive repair.

*Relaxation Achieved*—With hypnosis, the patient's apprehensions can be allayed, relaxation achieved, and response to directions assured. Usually, the dentist talks throughout the procedure, explains unexpected sounds, and suggests that the session is of short duration with minimal after effects.

*Extensive Procedures Possible*—One dentist reported an instance in which resection of bone and tissue was necessary. Upon completion of this lengthy process, the patient expressed relief that the operation had been simple and brief.

*Contraindication*—The most obvious contraindication to hypnosis is lack of receptivity. The patient must wish to be helped for effective results to be achieved. Occasionally, even a willing patient will be unable to achieve a hypnotic state, or will assume a state too light for therapeutic purposes.

Adapted from *Psychiatric Bulletin* 8:15 (Winter) 1957-1958.


*for scaling and stain removal*

**NEW CAVITRON**

**Portable Prophylaxis Unit...**

Removes stubborn calculus and stains effortlessly, rapidly, gently

At last, the drudgery of hand scaling is eliminated. With this new portable ultrasonic unit, a gentle 2-ounce touch quickly dislodges subgingival and supragingival deposits and stains . . . leaving clean, velvety-smooth tooth and root surfaces.

The slender, featherweight handpiece operates with a fine warm-water spray (without abrasive). It is supplied with a set of quick-change tips providing ready access to all areas.

There is virtually no tissue laceration or bleeding, almost no discomfort for your patients.

This portable unit is only 10" high, 9" wide, 12" deep. Silvertone finish.
The Prophylaxis Handpiece and Tips can be bought separately
for use with the CAVITRON DENTAL UNIT

*For details, ask your CAVITRON dealer, or write*

**CAVITRON EQUIPMENT CORPORATION**
42-26 28TH STREET • LONG ISLAND CITY 1, N. Y.


## The Contamination of Anesthetic Needles


**DONALD T. BENNETT, F.D.S.R.C.S. (Eng.)**



### Summary

A SERIES of 100 sterilized local anesthetic needles were examined for possible bacteriologic contamination which might occur when such needles were exposed to the atmosphere, in circumstances reasonably similar to those which could arise in general practice.


### Results

The series was divided into two experimental groups:

*Group A*—Fifty needles were freely exposed to the atmosphere for 15 minutes. After this interval, five needles (10 per cent), were found to be contaminated by saprophytic organisms.

*Group B*—A similar number of needles were exposed for a similar interval, but in this group the needles were covered with a "clean" absorbent cotton roll. In this group, only two needles (4 per cent) were contaminated with similar organisms. No pathogenic organisms were detected in either group.

Adapted from *Journal of Dental Research* **37**:145 (February) 1958.

*See second cover* D.D.5

UNIVERSAL DENTAL CO.
48TH AT BROWN STS., PHILADELPHIA 39, PA.

Please send Univac information

Dr. .....

Address .....

City .....

---

*See page* 197 D.D.5

E. R. SQUIBB & SONS
745 FIFTH AVE., NEW YORK, N. Y.

Please send Trigesic information.

Dr. .....

Address .....

City .....

---

*See page* 198 D.D.5

AMERICAN CONSOLIDATED MFG. CO., INC.
835 NORTH 19TH ST.
PHILADELPHIA 30, PA.

Please send generous sample of FluorOn for $1.00

Dr. .....

Address .....

City .....

Dealer .....

---

*See page* 199 D.D.5

THOS. LEEMING & CO., INC.
155 EAST 44TH ST., NEW YORK 17, N. Y.

Please send me descriptive and reprint material on Thermodent Tooth Paste.

Dr. .....

Address .....

City .....

---

*See page* 200 D.D.5

THE S. S. WHITE DENTAL MFG. CO.
PHILADELPHIA 5, PA.

Please send information about Airotor.

Dr. .....

Address .....

City .....

---

*See page* 201 D.D.5

WHITEHALL LABORATORIES
22 EAST 40TH ST., NEW YORK 13, N. Y.

Please send professional samples of Anacin.

Dr. .....

Address .....

City .....

---

*See pages* 202, 203, 204, 205 D.D.5

PROFESSIONAL SERVICE DEPARTMENT,
WYETH, P.O. BOX 8299, PHILADELPHIA 1, PA.

Please send Drugs of Choice in Dental Practice.

Dr. .....

Address .....

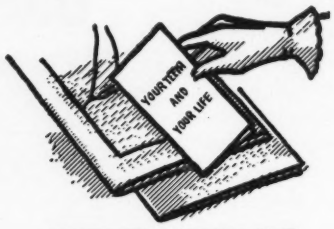
City .....

---

# 1,000

## copies of YOUR TEETH AND YOUR LIFE

only **$36.**




only **$36.**

**RECEPTION ROOM USE**

**Here is an opportunity of obtaining not only ethical but also ideal material for use in your patient-education program. One thousand copies of "Your Teeth and Your Life" could easily take care of all your requirements for the next several months. And the cost is only $36.**

There are ten two-color charts in "Your Teeth and Your Life" which tell in an easily understood manner the wisdom of periodic dental care and the danger of neglect.

The pamphlet can be used in five different ways: (1) distribution to patients upon dismissal; (2) reception room reading; (3) monthly statement enclosure; (4) distribution during talks before Parent-Teacher groups; (5) enclosure with patient-recall cards. It is wonderfully effective in any of these uses.

The coupon is for your convenience. Order your copies now for immediate delivery.

**Dental Digest, 1005 Liberty Ave., Pittsburgh 22, Pa.**

☐ Please send me 1000 copies of "Your Teeth and Your Life" immediately. I enclose $36, or ☐ bill my dealer.

☐ Please send me 100 copies of "Your Teeth and Your Life" for which I enclose $4. Or ☐ bill my dealer.

Dr. .....

Address .....

City .....

Dealer .....

---

*See page* 206 D.D.5

WALLACE LABORATORIES
NEW BRUNSWICK, N. J.

Please send Miltown samples and literature.

Dr. .....

Address .....

City .....

---

*See page* 229 D.D.5

MYERSON TOOTH CORPORATION
CAMBRIDGE 39, MASS.

Please send information on Comparison Test.

Dr. .....

Address .....

City .....

---

*See page* 230 D.D.5

AMERICAN CONSOLIDATED MFG. CO., INC.
835 NORTH 19TH ST.
PHILADELPHIA 30, PA.

Please send generous sample of PearlOn for $1.00.

Dr. .....

Address .....

City .....

Dealer .....

---

*See pages* 232, 233 D.D.5

ASTRA PHARMACEUTICAL PRODUCTS, INC.
WORCESTER 6, MASS.

Please send information on Xylocaine Ointment.

Dr. .....

Address .....

City .....